

ENSV FY07 Inspection Transmittal Form

Today's Date:
12/12/2007

INSPECTION ACTIVITY

Media RCRA Contractor	Type of Inspection CEI	Selection Criteria IA SQG	Compliance Officer Koesterer, B	Inspection Date 08/15/2007
Inspector SES	Activity #			

FACILITY INFORMATION

Facility Name Advanced Heat treat Corp.	ID Number IAD056504186	NAICS/SIC Code 332811		
Address 2839 Burton Ave.	City Waterloo	County Black Hawk	State IA	ZIP 50703
Facility Activity Conducts case hardening of steel and Cast iron parts.				

INSPECTION FINDINGS

NOV/NOFF Issued? Yes No N/A

Potential SNC? Yes No N/A

Preliminary Findings (briefly list regulatory deficiencies)

MULTIMEDIA FINDINGS

MM Participating Program* <input type="text"/>	MM Level <input type="text"/>	MM Type <input type="text"/>	Potential EJ? <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A
MM Screening completed? <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A	SBREFA handout provided? <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A		
If yes, was MM Screening Checklist forwarded? <input checked="" type="radio"/> Yes <input type="radio"/> No		* A=CAA, W=CWA, R=RCRA, E/T=EPCRA/TSCA, U=UST, C=CFC, S=SPCC, U-I=UIC, Wet., PWS, All, EMS = EMS	
If yes, who? > <input type="checkbox"/> CAA <input checked="" type="checkbox"/> EPCRA/TSCA <input type="checkbox"/> SPCC <input type="checkbox"/> CWA <input type="checkbox"/> UST <input type="checkbox"/> PWS			
<input type="checkbox"/> UIC <input type="checkbox"/> Wetlands <input type="checkbox"/> RCRA <input type="checkbox"/> CFC <input type="checkbox"/> EJ <input type="checkbox"/> All		EMS? <input type="radio"/> Yes <input checked="" type="radio"/> No	EMS ISO 14001 certified? <input type="radio"/> Yes <input checked="" type="radio"/> No



REPORT OF RCRA COMPLIANCE EVALUATION INSPECTION

AT

Advanced Heat Treat Corp.
2839 Burton Ave.
Waterloo, IA 50703
(319) 232-5221
EPA ID Number: IAD056504186

ON

August 15, 2007

BY

SES, Inc.

FOR

U.S. Environmental Protection Agency
Region 7
Environmental Services Division

INTRODUCTION

At the request of the U.S. Environmental Protection Agency (EPA), I conducted a Resource Conservation and Recovery Act (RCRA) Compliance Evaluation Inspection (CEI), at Advanced Heat Treat Corp. (AHT), 2839 Burton Ave, Waterloo, Iowa, on August 15, 2007. The CEI was conducted under the authority of Section 3007 of RCRA, as amended. This narrative report and attachments present the results of the CEI. Attachment 1 includes the Handler Information Report and Attachment 2 includes a Multimedia Checklist completed during the inspection. The Handler Information Report was changed to update the mailing address, add operator information, and update the codes for hazardous waste handled by the facility. A Drive-by and Site Entry Worksheet (Attachment 3), the Facility Background Worksheet (Attachment 4), and a diagram of the facility (Attachment 5) also are included. In addition to the CEI, I provided compliance assistance in the form of handouts and technical guidance.

PARTICIPANTS

Advanced Heat Treat Corp.

Jeff Thompson, Vice President of Manufacturing
Ron Kane, Maintenance Manager
Gayla Hoppenworth, Human Resources Manager

SES, Inc.

Marilyn J. Mattione, Environmental Engineer
Andrew M. Dodson, Environmental Scientist

INSPECTION PROCEDURES

Before entering the facility, a drive-by inspection was conducted. During the drive-by inspection, no areas of concern were observed.

Upon arrival at the facility, I informed the receptionist that I was a representative of the EPA, and asked to see the appropriate facility official regarding an inspection for hazardous waste compliance. I was directed to Mr. Ron Kane. When I presented my EPA credentials letter to Mr. Kane, he directed me to Mr. Jeff Thompson. Mr. Thompson acted as the official facility representative. I presented my credentials letter to Mr. Thompson at the entry briefing and explained to both he and Mr. Kane the purpose of the CEI and the procedures that I would follow. I also provided Messrs. Thompson and Kane with a copy of the EPA Confidentiality Notice (Notice) (Attachment 6). I requested that Mr. Thompson read the Notice and stated that at the conclusion of the CEI, he would be given an opportunity to make or not make a claim of confidentiality. I then provided Messrs. Thompson and Kane with a copy of the U.S. Federal Code 1001 and 1002, which they read concerning giving false statements and documents to federal inspectors. At that time, Mr. Thompson contacted

Ms. Gayla Hoppenworth at the nearby corporate office, in order to have her gather the pertinent documents that would be needed during the inspection. Upon her arrival, I presented Ms. Hoppenworth with a copy of the U.S. Federal Code 1001 and 1002, which she read concerning giving false statements and documents to federal inspectors.

I conducted the CEI during the morning of August 15, 2007. I started with the entry briefing followed by the discussion of waste streams, discussion of waste management practices, visual inspection, records review, discussion of compliance information and an exit briefing. During the CEI, I discussed and reviewed the facility operations, wastes generated, waste management practices, and pertinent documents. During the visual inspection, I was accompanied by Messrs. Thompson and Kane, and Ms. Hoppenworth. During the visual inspection, photographs were taken when applicable. Two photographs were taken during the CEI. A photo log and individual photographs are included in Attachment 7.

At the conclusion of the CEI, I conducted an exit briefing with Messrs. Thompson and Kane, and Ms. Hoppenworth. Attachment 8 includes an Exit Briefing Checklist, which indicates the names and titles of the exit briefing participants. At this time, Mr. Thompson signed the Notice indicating that no confidential business information had been provided during the CEI. This Notice was previously cited as Attachment 6. I also provided Mr. Thompson with a Receipt for Documents and Samples (Attachment 9), which he signed as acknowledgement of receipt. I did not issue a Notice of Preliminary Findings during this inspection.

FACILITY DESCRIPTION

AHT performs the service of heat treating steel products made by other parties. Major raw materials used by AHT include natural gas, methanol, ammonia, and mineral oil. An on-site laboratory performs physical metallurgical testing, using no chemicals in its operations. The company began operations at this facility approximately 25 years ago, or around 1981.

AHT is located in the northern part of Waterloo, Iowa, and consists of two buildings. Mr. Thompson stated that the main production building is 41,000 sq. ft. under roof, and that the adjacent storage building is 5,000 sq. ft. under roof. Currently, there are approximately 61 full-time and part-time employees that work three shifts per day, six days per week (Monday through Saturday). Each shift works a 40-hour work week. The shift hours are 7 a.m. to 3 p.m., 3 p.m. to 11 p.m., and 11 p.m. to 7 a.m.

During the CEI, AHT was inspected as a Conditionally Exempt Small Quantity Generator of hazardous waste (CESQG) and as a generator of used oil. CESQG is defined as a generator of no more than 100 kilograms of hazardous waste per month.

FINDINGS AND OBSERVATIONS

1. Waste streams

A generator waste stream checklist is included as Attachment 10. The following wastes were generated by AHT:

A. Spent solvent

Mr. Thompson stated that AHT performs vapor degreasing in a parts cleaner. The parts cleaner is located in the manufacturing area. Mr. Kane stated that the parts cleaner uses NEU-TRI solvent. A Material Safety Data Sheet (MSDS), Attachment 11, documents that NEU-TRI solvent consists of more than 99 percent 1,1,2-trichloroethylene.

Mr. Kane stated that the solvent becomes contaminated with oil and solid metal filings during use. Spent solvent is generated from cleaning out the degreasing machine. Mr. Kane stated that the degreaser is cleaned by pumping out the “good solvent,” removing a lower “oil layer,” and returning the “good solvent” back into the machine. According to Mr. Kane, solid metal filings also are removed from the parts cleaner by hand as needed and added to spent solvent.

AHT maintains solvent consumption log records for the vapor degreaser. I reviewed the records for the past three years. According to these records, April 2007 was the most recent month when spent solvent was generated, and 188 pounds of spent solvent was generated that month. A copy of the consumption log for this month is provided in Attachment 12. The generation rate for this spent solvent is further discussed in the RCRA Status section later in this report.

Mr. Kane said that the spent solvent is stored in the waste storage area in the nearby storage building (**Attachment 7, Photos 1 and 2**). I observed two closed containers (55-gallon drums) stored in this area that were labeled “Hazardous Waste.” One container was marked with an accumulation start date of September 12, 2006. Mr. Kane stated that this container was approximately one-third full. He moved the container around, and confirmed that statement. The second container was stored behind the first container. I could see that the second container also was marked with an accumulation start date, but could not read the date. Mr. Kane climbed close to this container and stated that the container marking was hard to read, but he believed that this container was marked with an accumulation start date of March 25, 2006.

AHT has determined the spent solvent is a hazardous waste. Mr. Kane stated that the spent solvent is picked up by Safety-Kleen or Hydrite for disposal. Mr. Kane said he did not know the ultimate disposition of the waste. Attachment 13 contains a manifest and Land Disposal Restriction Notice for the most recent off-site shipment of spent solvent. These records were obtained by Ms. Hoppenworth through the corporate office. Based on this manifest, Hydrite transports this waste as a hazardous waste to WRR

Environmental Services in Wisconsin. Based on this manifest, AHT has determined the spent solvent to be an F001, D022, D039, and D040 hazardous waste.

B. Rust inhibitor waste

Mr. Thompson stated that AHT uses a rust inhibitor. This inhibitor is used for packaging purposes in order to guard against any rusting while in shipping. Mr. Thompson said that the rust inhibitor is applied by submersion. Finished steel parts are dipped into the rust inhibitor, and then allowed to drain. He said that since the rust inhibitor bath is never changed out, no waste is generated from this process.

While inspecting the waste storage area, a container (55-gallon drum) of DASCO GUARD was found. When asked about this container, Mr. Thompson said that DASCO GUARD was a rust inhibitor that AHT had stopped using in the last three to four weeks. According to Mr. Thompson, this rust inhibitor waste container was stored in the waste storage area for future removal and transport by Safety-Kleen. Mr. Thompson said that he believed the drum was a hazardous waste but would have to review the MSDS to be sure.

Attachment 14 contains an MSDS for DASCO GUARD. Based on the MSDS, it appears that the rust inhibitor waste does not meet the definition of hazardous waste. At the exit briefing, I informed Mr. Thompson that it was important to firmly make a hazardous waste determination in a timely manner, because additional requirements for managing hazardous waste could be triggered based on the quantity of hazardous generated in a month.

C. Used oil

Mr. Kane stated that the process of heat treating metal in furnaces involves the use of a quenching medium, which helps cool the metal after it has been heated. The quenching medium consists of one of two types of mineral oil plus an additive. This additive acts as a quench accelerator.

Mr. Kane stated that used oil is skimmed from the quench oil tank, and is placed in a container (55-gallon drum). When this container is full, its contents are then transferred to a different container, a 275-gallon tote. Mr. Kane stated that the generation rate of the used oil from this process varies.

Mr. Kane stated that forklift maintenance generates approximately 10 quarts of used motor oil every two months. Used motor oil is stored in a container (55-gallon drum) in the waste storage area. The container was in good condition and labeled "Used Oil" (**Attachment 7, Photo 2**).

According to Mr. Thompson, AHT has not performed testing to determine if the used oil meets specifications. Used oil is removed by Cedar Falls Oil of Cedar Falls, Iowa, for use as fuel in an industrial furnace.

AHT maintains records of the used oil shipments. An example of the used oil shipment records is provided in Attachment 15. Based on my review of AHT's records from December 2006 to July 2007, the shipments occurred every one to two months and usually consisted of between 180 gallons and 325 gallons of used oil. On March 21, 2007, a shipment 450 gallons of used oil was recorded. According to Mr. Kane, this larger quantity was a result of a bath cleanout that is not done monthly.

The used oil generator checklist is included in Attachment 16.

D. Furnace cleanout waste

Mr. Kane stated that metal is heat treated in a natural gas furnace and that mineral oil is used to quench the metal as part of this process. According to Mr. Kane, the furnaces and their associated quench tank are cleaned out every four to five years. The furnace cleanout waste consists of used mineral oil and carbon scrapings. Mr. Kane stated that three 55-gallon drums of this waste were produced in April 2007.

AHT has determined the furnace cleanout waste to be a non-hazardous waste based on process knowledge and manages the waste as used oil. These drums are picked up and transported by Safety-Kleen. When asked where Safety-Kleen transported the furnace sludge and how it was disposed, Mr. Kane said that he did not know. Mr. Kane stated that Safety-Kleen would conduct additional testing prior to disposal of the waste.

During the visual inspection, Mr. Kane identified three containers (55-gallon drums) in the waste storage area as storing the furnace cleanout waste (**Attachment 7, Photo 1**). I observed that these three containers were labeled "Used Oil."

E. Quench spray waste

Mr. Thompson said a heat-treating method used at the facility is called induction hardening. The quench spray for this process consists of water and UCON Quenchant product. According to its MSDS sheet, UCON Quenchant consists of less than 55 percent polyalkylene glycol. Mr. Thompson stated that quench spray waste is discharged to the city sanitary sewer. When asked whether a hazardous waste determination had been done on this waste, Mr. Thompson said that through product knowledge, this waste had been determined to be non-hazardous. Mr. Thompson stated that "no particular approval" had been obtained from the city for this discharge, but that it has been occurring for years. According to Mr. Thompson, city officials are familiar with facility operations.

F. Scrap metal

Scrap metal is generated at the facility from construction activities. Mr. Thompson stated that the scrap metal will be picked up for recycling by a scrap metal dealer in Waterloo. I did not determine the name of the scrap metal dealer.

G. Waste lamps

AHT has determined that waste lamps generated at the facility are nonhazardous based on product knowledge. Mr. Kane said that AHT specifically purchases only nonhazardous types of fluorescent light bulbs. He stated that the generation rate of waste lamps was not known or tracked. Mr. Kane stated that waste lamps were picked up for disposal by Safety-Kleen. When asked where Safety-Kleen transported the waste lamps, and how they were disposed, Mr. Kane said that he did not know. I did not review any shipping records for this disposal.

H. General trash

General trash is picked up by Waterloo Waste Management. AHT representatives believe it is transported to the county landfill, but were not certain. All general trash has been deemed nonhazardous. Cardboard and paper also is picked up by Waterloo Waste Management for recycling.

2. RCRA status

Based on information in EPA regional files and EPA Envirofacts database, AHT submitted a Notification of Regulated Waste Activity (Notification) dated August 3, 1994. The Notification consisted of F002 hazardous waste. The Notification indicated that AHT was operating as a small quantity generator (SQG) of hazardous waste. SQGs of hazardous waste generate between 100 and 1000 kilograms of hazardous waste per month.

My review of AHT solvent consumption logs for the 19 months since the last off-site shipment of spent solvent in January 2006 identified the following:

- In April 2007, AHT generated 188 pounds of spent solvent.
- In November 2006, AHT generated 145 pounds of spent solvent.
- In September 2006, AHT generated 20 gallons of spent solvent.
- No removal of solids was recorded in the logs from January 2006 to July 2007.

At the time of the inspection, I estimated that 20 gallons of spent solvent would weigh less than 220 pounds, and initially determined that AHT as generating no more than 220 pounds (or 100 kilograms) of hazardous waste per month. Consequently, I evaluated AHT as a CESQG.

After the inspection, I re-estimated the potential weight of 20 gallons of spent solvent generated in September 2006. The spent solvent originates from the use of NEU-TRI solvent. According to the MSDS in Attachment 11, the density of virgin NEU-TRI solvent is 1.46 times the density of water. Using a water density of 8.34 pounds/gallon, I calculated the density of virgin NEU-TRI solvent as 12.2 pounds/gallon. Thus, 20 gallons of virgin solvent would weigh 244 pounds. According to Mr. Kane, an oil layer beneath the "good solvent" is the source of the spent solvent waste. Therefore, I

estimate that 20 gallons of spent solvent would weigh at least 244 pounds (or at least 109 kilograms).

AHT potentially exceeded the 100 kilogram generation limit for a CESQG during September 2006. Therefore, AHT may be subject to SQG hazardous waste management requirements for the hazardous waste generated in September 2006. Based on the accumulation start dates on the two spent solvent drums, the hazardous waste generated in September 2006 is still stored on site. The storage location is not near the point of generation and has been stored for at least 10 months. Pursuant to 40 CFR 262.34(e), a small quantity generator who must transport his waste over a distance of 200 miles or more may accumulate hazardous waste on site for 270 days or less. I did not determine AHT's compliance with the following SQG requirements for storage of hazardous waste generated in September 2006:

- 40 CFR 262.34(d)(2) and 40 CFR 265.174 for inspection of containers;
- 40 CFR 262.34(d)(4) and 40 CFR 265.32 for required equipment;
- 40 CFR 262.34(d)(4) and 40 CFR 265.33 for testing and maintenance of equipment;
- 40 CFR 262.34(d)(4) and 40 CFR 265.34 for access to communications and alarm systems;
- 40 CFR 262.34(d)(4) and 40 CFR 265.37 for arrangements with local authorities, and,
- 40 CFR 262.34(d)(5) for emergency coordinator, posting of emergency information and training.

During the inspection, my review of AHT's solvent consumption logs for 2004 and 2005, I identified the generation of 20 gallons of spent solvent in May 2004 and 20 gallons of spent solvent in March 2005. Therefore, AHT was also potentially subject to SQG hazardous waste management requirements for the hazardous waste generated in May 2004 and March 2005.

Marilyn Mattione
Marilyn Mattione
Environmental Engineer

Date: 04 DEC 07

Attachments:

1. Handler Information Report (1 page)
2. Region 7 Multimedia Screening Checklist (1 page, both sides)
3. Drive-by and Site Entry Checklist (1 page)
4. Facility Background Worksheet (2 pages)
5. Diagram of the Facility (1 page)
6. Confidentiality Notice (1 page)
7. Photo Log (2 pages)
8. Exit Briefing Checklist (1 page)
9. Receipt for Documents (1 page)
10. Generator Waste Stream Worksheet (3 pages)
11. Degreasing Solvent MSDS (5 pages, both sides)
12. Solvent Consumption Log (1 page)
13. Spent Solvent Shipment Record (3 pages)
14. DASCO Guard MSDS (2 pages, double-sided; 1 page single-sided)
15. Cedar Falls Oil Co. Recycling Record (1 page)
16. Used Oil Generator Checklist (2 pages)

Attachment 1

Handler Information Report

HANDLER INFORMATION REPORT

May 21, 2007

PROCEDURES for Inspectors/Investigators/etc. performing Site Visits

Present the Facility representative with a copy of their:

- Handler Information Report (attached)
- Copy of the current Notification Form (attached)
- Copy of the current Notification Booklet (attached)

Our instructions to them are printed on their Handler Information Report - and should be self explanatory. If the facility wants to revise their Handler Information Report, they can do so and mail it back to EPA - or have the inspector deliver it.

If during the course of the site visit, the inspector/investigator becomes aware of any changes which should be made to the information printed on this form, please make the corrections and return the form to: Lisa Haugen, ARTD/RESP.

EPA RCRA ID Number: IAD056504186

Name of Company/Site: ADVANCED HEAT TREAT CORP
 Location of Site: 2839 BURTON AVE
 WATERLOO, IA 50703
 BLACK HAWK County

Land Type: Private

NAICS:

Mailing Address: ~~2839 BURTON AVE~~ ^{nm} 2825 Midport Blvd
 WATERLOO, IA 50703

Site Contact: GARY SHARP
 Phone Number: (319) 232-5221
 Address: 2839 BURTON AVE
 WATERLOO, IA 50703

Current Owner of Site: GARY SHARP
 Address:
 Phone Number: (319) 232-5221
 Owner Type: Private

Current Operator of Site: Gary Sharp
 Address: 2839 Burton Ave
 Waterloo, IA 50703
 Phone Number: 319-232-5221
 Operator Type: Private

TYPE(S) OF REGULATED ACTIVITY: Federal Small Quantity Generator

Hazardous Wastes Handled: ~~RCRA~~ ^{nm} F001, D040

I 07/29/94 3 N 08/03/94 2

Certified by Notification on 08/03/94 by

Date of Site Visit: August 15, 2007Name of Inspector (Please print): Marilyn Matrone(Check one): EPA R7 ENSV EPA R7 Contractor NOWCC/SEE InvestigatorSignature of Inspector: Marilyn A Matrone

Attachment 2

Region 7 Multimedia Screening Checklist

REGION VII MULTIMEDIA SCREENING CHECKLIST

Facility Name: Advanced Heat Treat Corp. Inspector Marilyn Mattione
 Facility Ownership: Private Primary Media: RCRA
 Street: 2839 Burton Avenue Inspector Phone Ext.: 913-307-0046 x24
 City: Waterloo State: IA Zip: 50703 Date: Aug 15, 2007
 Phone: 319-232-5221 Facility Contact: Gary Sharp SIC/NAICS Code 3398
 Number of Employees: 61 Full and part-time Work Hours/Shifts 40 hrs wk / 3 shifts Facility Subject to OSHA regulations Yes No
7-3, 3-11, 11-7

Main facility activity, major process chemical(s) & description: Heat treating of steel parts made by others

(Check all that apply): painting/coating (water-based , solvent-based) , printing , reacting , formulating , distilling ,
 water treatment , refrigeration , manufacturing , parts washers/degreasing (water-based , halogenated-based ,
 non-halogenated-based) , combustion (boiler, furnaces, oxidizers) plating (chrome , other _____).

ENVIRONMENTAL JUSTICE (Note: Forward to EJ if a concern is identified during your inspection)

1. Is the facility located in an apparent low income area (e.g., with many abandoned and dilapidated properties)? No (stop) Yes
 If yes, is facility less than 1000 feet from nearest routinely occupied property (house, school, etc.)? No (stop) Yes **Forward to EJ**

EMERGENCY PLANNING & COMMUNITY RIGHT TO KNOW ACT (EPCRA) & TOXIC SUBSTANCE CONTROL ACT (TSCA)

1. Did facility file a Tier II report with fire department, Local & State Emergency Planning Committee? Yes No **Forward to EPCRA**
 2. Did facility manufacture, import, or process (formulate, blend, package) >25,000 lbs of a chemical or >100 lbs of a Persistent Bioaccumulative Toxin (lead, mercury, or polycyclic aromatic compounds) at any time over the last 5 years? No (stop) Yes **Forward to EPCRA**
 3. Has the facility: **If any box in question 3 is marked - Forward to EPCRA**
 a. Stored ≥500 lbs of ammonia , ≥100 lbs of chlorine , or ≥10,000 lbs of an industrial chemical , at any time over the last 2 years?
 b. Stored ≥10,000 lbs of pressurized flammable material (propane, methane, butane, pentane, etc.) at any time over the last 2 years?
 c. Used ≥10,000 lbs of ammonia , chlorine , halogenated solvents , solvent-based paints , or solvents , or nitrated compound, over the last calendar year?
 d. Generated ≥ one half pound of metal dusts, fumes, or metal turnings, over the last calendar year?
 4. Does the facility have any oil filled electrical equipment No (stop) Yes **Forward to TSCA and ask** Has facility tested oil filled equipment to determine PCB content; No Yes number containing PCBs greater than 50 ppm _____ and percent of all equipment tested _____. Is equipment leaking (including wet or weeping equipment)? No Yes - **Get Photo**
→ installed 6 weeks ago

CLEAN WATER ACT (CWA) - National Pollution Discharge Elimination System (NPDES), Industrial Pretreatment, Storm Water, & Wetlands

1. Does the facility discharge any wastewater to storm sewers, surface water, or the land? No (stop) Yes
 If yes, are all wastewater discharges permitted? Yes No **Forward to CWA**
 2. Does the facility have process wastewaters that are discharged to a city POTW (Publicly Owned Treatment Works)? No (stop) Yes
 If yes, are the discharges permitted by: State? , City? - If yes, Stop here. No **Forward to CWA**
 If yes, does the city have a state or EPA approved pretreatment program? Yes No or Don't Know **Forward to CWA**
 3. During rainfall events, can storm water carry pollutants from manufacturing, processing, storage, disposal, shipping and receiving areas, or from construction sites >1 acre, to storm sewers or surface water? No (stop) Yes
 If yes, does the facility have an NPDES permit for these storm water discharges? Yes No **Forward to CWA**
 4. Did you see any wastewater discharges not identified by the facility? No (stop) Yes - Identify location, time, appearance of discharge: _____
(Get Photo) Forward to CWA
 5. Does the facility have any wetland areas (e.g. streams, ponds, or temporarily wet areas)? No (stop) Yes
 If yes, have any wetland areas been dredged, filled, channelized, dammed, or had gravel removed from them within the last 5 years?
 No (stop) Yes - Identify location and timeframe _____ **(Get Photo) FWD to Wetlands**

SAFE DRINKING WATER ACT (SDWA) - Underground Injection Control (UIC) & Public Water System (PWS)

- 1. Does facility discharge any liquids to the subsurface (septic systems, disposal wells, cesspools, etc.)? No (stop) Yes **Forward to UIC**
If yes, do these liquid wastes consist of sanitary wastewater only? Yes No
- 2. Does facility provide drinking water to 25 people or more from its own source (private well, pond, etc)? No (stop) Yes **Forward to PWS**
If yes, does the facility test or monitor its drinking water in order to comply with state regulations? Yes No

CLEAN AIR ACT (CAA) and CFCs

- 1. Do you see any dense, non-steam, smoke or dust emissions leaving the facility property? No Yes **Forward to CAA**
Source _____ **(Get Photo)**
- 2. Does the facility have any new air pollution emitting equipment that was constructed or installed in the past 5 years? No (stop) Yes
If yes, is equipment permitted? Yes No **Forward to CAA** Describe: 3 furnaces; inducance + nitrating
- 3. Does the facility have any cooling units that contain >50 lbs of refrigerant? No (stop) Yes **Forward to CFC**
If yes, are these units: Self-serviced? Contract Serviced? - Service Company: _____
- 4. Does the facility have a refrigeration process that contains more than 10,000 lbs of ammonia? No (stop) Yes **Forward to EPCRA/RMP**
- 5. Does the facility service motor vehicle air conditioning systems? No (stop) Yes **Forward to CFC**

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) and UNDERGROUND STORAGE TANKS (UST)

- 1. Does the facility generate more than 30-gallons (220 lbs./100kg) of hazardous waste per month or at any one time? No (stop) Yes
If yes, does facility have an EPA Hazardous Waste Identification Number? Yes (stop) No **Forward to RCRA**
- 2. Is hazardous waste treated , stored >90-days , burned , land filled , put in surface impoundments or waste piles ?
No (stop) Yes If yes, is the facility permitted for above described activity? Yes No **Forward to RCRA**
- 3. Did you see or does the facility have any large quantities of materials that the facility claims to be non-hazardous waste material (>10 drums, roll-offs, waste piles, etc. - exclude clean office trash, cardboard, & packaging type wastes)? No (stop) Yes

Material Claimed To Be Non-Hazardous

How does the facility know these wastes are non-hazardous?

- _____ Testing, industry or manuf. info., MSDS, etc. ; None available **Forward to RCRA**
- _____ Testing, industry or manuf. info., MSDS, etc. ; None available **Forward to RCRA**
- _____ Testing, industry or manuf. info., MSDS, etc. ; None available **Forward to RCRA**
- _____ Testing, industry or manuf. info., MSDS, etc. ; None available **Forward to RCRA**
- _____ Testing, industry or manuf. info., MSDS, etc. ; None available **Forward to RCRA**

- 4. Did you see any leaking hazardous waste containers, drums, or tanks? No Yes **Forward to RCRA**
Describe: _____ **(Get Photo)**
- 5. Did you see any signs of spills or releases (e.g., dead or stressed vegetation, stains, discoloration)? No Yes **Forward to RCRA**
Describe: _____ **(Get Photo)**
- 6. Did you see any chemical or waste handling practices that concern you (access to children/public)? No Yes **Forward to RCRA & EPCRA** Describe: _____ **(Get Photo)**
- 7. Does the facility have any past or present underground petroleum product or hazardous material tanks? No Yes **Forward to UST**
- 8. Does the facility have any underground fuel tanks for emergency generators? No Yes **Forward to UST**

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN (SPCC)

- 1. Does the facility have any aboveground oil tanks (petroleum, synthetic, animal, fish, vegetable), with an aggregate volume >1,320 gallons?
No (stop) Yes - Does the facility have a certified SPCC Plan? Yes No **Forward to SPCC**
If yes, are there secondary containment systems for the tanks? Yes No **Forward to SPCC**
If yes, are any tanks leaking where oil could reach waters of the State or U.S.? No Yes **(Get Photo) Forward to SPCC**

ENVIRONMENTAL MANAGEMENT SYSTEMS (EMS)

- 1. Does your facility have an EMS? No Yes
- 2. Is the facility's EMS ISO 14001 certified? No Yes *not a mmm*

*** PLEASE TAKE PHOTOS TO DOCUMENT POTENTIAL PROBLEMS**

Attachment 3

Drive-by and Site Entry Checklist

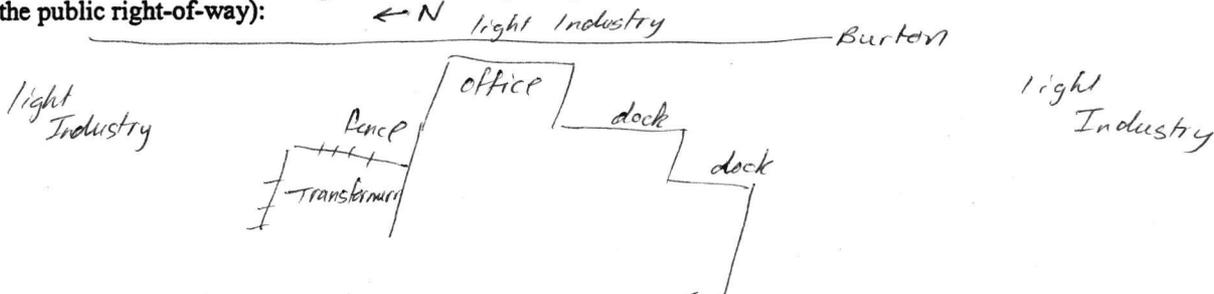
Appendix 1-3

Facility: Advanced Heat Treat Corp. Date: 8-15-07 Arrival time: 8:15 am

DRIVE-BY

1. Drive-by conducted from public right-of-way? Yes No

2. Determine the direction "North" with respect to the facility and provide a brief sketch of the layout and orientation (as can be viewed from the public right-of-way):



3. Obvious concerns visible from public right-of-way (photos)? Yes No

- | | | | |
|--------------------|--------------------|------------------------|-----------------------|
| - Containers | - Tanks | - Processing Equipment | - Loading Areas |
| - Unloading Areas | - Security Devices | - Open Drums | - Stressed Vegetation |
| - Unusual Staining | - Unusual Odors | - Obvious Discharges | - Improper Disposal |
| - Safety Concerns | - Other Concerns | | |

Appendix 1-4

SITE ENTRY AND INBRIEFING

1. Used main entrance Entered during normal operating hours Excessive delays (>15 minutes - denial of access?) - No

2. Facility Representative(s): Jeff Thompson Title: VP Manufacturing
Ron Kane Title: Maintenance Manager
Gayla Hopperworth Title: HR Resource Manager

3. Does representative have intimate knowledge of all waste management practices? Yes No

How long in position? 3 years as VP 19 year w/comp + corp office (Thompson - m/m 8/20/07)

4. Introduction: 4 year as MM, 9 years w/comp (Kane - m/m 8/20/07)

- Presented credentials
- Explained responsibility to provide accurate information and provided copies of Section 1001 and 1002 U.S.C. to facility
- Verified presence at correct facility (checked address/I.D. #)
- Explained authority to conduct inspection (Section 3007 of RCRA)
- Identified personal safety considerations: None - No touch
- Explained the purpose, scope, and order of the inspection
- Completed Multimedia screening checklist
- Explained documentation process - worksheets, checklists, photo's, notes, statements, etc
- Provided SBRFA - at exit
- Obtained GPS reading - NA
- Explained facility's right to claim CBI

5. Was full access granted? Yes By facility representative or Other(name): _____

No - Access denied Name of person denying access: _____

Time of denial: NA

Reason for denial, or limitations placed on access:

Attachment 4

Facility Background Worksheet

6. Verified/compared above information with facility Notification Form: YES NO

TCE Degreasing Solvent so F002, D040 instead of F002

7. **GENERATOR STATUS:** (based on records review)

- Non-generator
- CE (0-100kg/mo or 1 kg/mo acute waste and accumulate <1000 kg or 1 kg acute waste or 100 kg of acute spill residue)
- SQG (100-1000kg/mo and accumulate <6000 kg)
- LQG (>1000kg/mo)

Is facility's status solidly within above category? YES NO
(If not carefully verify status and document)

Possible that 20 gallons of F002 spent solvent waste exceeded 220 lbs (100 kg) for September 2006.

8. **TSD STATUS:** Treatment Storage Disposal NA

Note: Types of units, number of units, capacities, processes, etc.

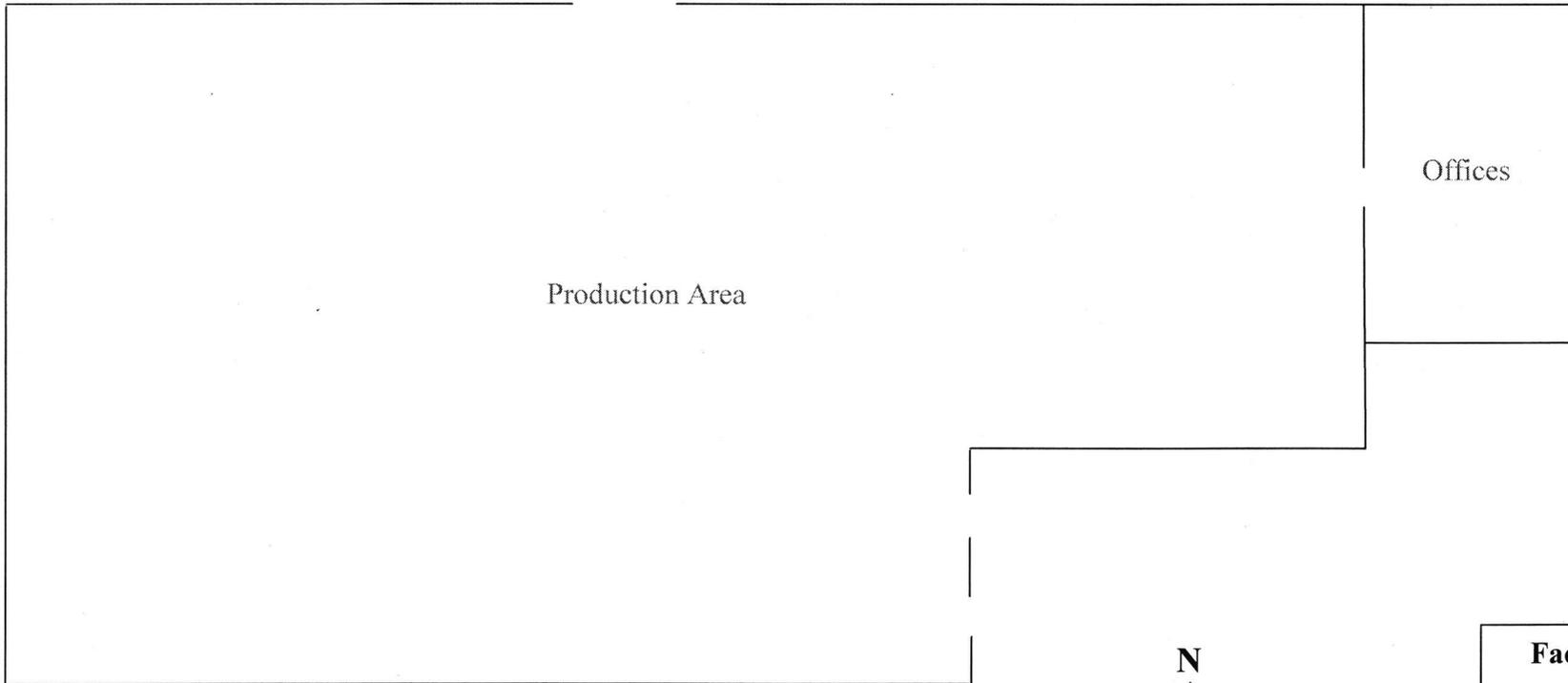
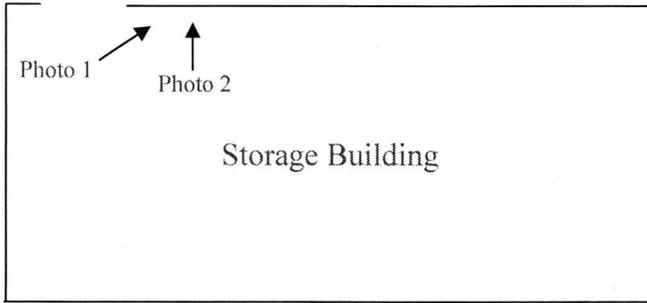
9. Resolved questions from Pre-Inspection Worksheet? YES NO No Questions

10. Resolved compliance officers questions from Pre-Inspection Worksheet? YES NO No Questions

11. Requested site map or diagram to identify all observations? YES None available

Attachment 5

Diagram of the Facility



Facility Site Diagram	
Site: Advanced Heat Treat Corp. Scale: not to scale	
	SES, INC.

Attachment 6

Confidentiality Notice

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CONFIDENTIALITY NOTICE

Facility Name <i>Advanced Heat Treat Corp.</i>	
Facility Address <i>2839 Burton Ave, Waterloo IA 50703</i>	
Inspector (print) <i>MARILYN MATTIONE</i>	
U.S. EPA, Region VII, 901 N. 5th St., Kansas City, KS 66101	Date <i>08/15/2007</i>

The United States Environmental Protection Agency (EPA) is obligated, under the Freedom of Information Act, to release information collected during inspections to persons who submit requests for that information. The Freedom of Information Act does, however, have provisions that allow EPA to withhold certain confidential business information from public disclosure. To claim protection for information gathered during this inspection you must request that the information be held CONFIDENTIAL and substantiate your claim in writing by demonstrating that the information meets the requirements in 40 CFR 2, Subpart B. The following criteria in Subpart B must be met:

1. Your company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.
2. No statute specifically requires disclosure of the information.
3. Disclosure of the information would cause substantial harm to your company's competitive position.

Information that you claim confidential will be held as such pending a determination of applicability by EPA.

I have received this Notice and <u>DO NOT</u> want to make a claim of confidentiality at this time.	
Facility Representative Provided Notice (print) <i>Jeff A. Thompson</i>	Signature/Date <i>Jeff A. Thompson 8/15/07</i>

I have received this Notice and <u>DO</u> want to make a claim of confidentiality.	
Facility Representative Provided Notice (print)	Signature/Date

Information for which confidential treatment is requested:

Attachment 7

Photo Log

Photo Log

Facility Name/City & State: Advanced Heat Treat Corp.

Facility ID#: IAD056504186

Inspection Date: August 15, 2007

Photographer: Marilyn Mattione

Type of Camera: Panasonic Lumix DMC-IZ3PP

Digital Recording Media: 1GB Lexar media card 32X high speed

All Digital Photos Were Copied by: Marilyn Mattione on August 16, 2007

Report Photo #	Photographer	Date	Approx. Time on Camera	File Name	Description
1	Marilyn Mattione	8/15/07	1030	P1020050.jpeg	Waste Storage Area overview. The three black 55-gallon drums on the left contain furnace cleanout waste.
2	Marilyn Mattione	8/15/07	1030	P1020051.jpeg	Waste Storage Area. NEU-TRI hazardous waste is contained in the green 55-gallon drum on the right and in the 55-gallon drum behind it. Used oil from forklifts is stored in the blue 55-gallon drum on the left.



#1

Waste Storage Area overview. The three black 55-gallon drums on the left contain furnace cleanout waste.



#2

NEU-TRI hazardous waste is contained in the green 55-gallon drum on the right and in the drum behind it. Used oil from forklifts is stored in the blue 55-gallon drum on the left.

Attachment 8

Exit Briefing Checklist

Attachment 9

Receipt for Documents

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RECEIPT FOR DOCUMENTS AND SAMPLES

Facility Name <i>Advanced Heat Treat Corp.</i>
Facility Address <i>2839 Burton Ave, Waterloo, IA 50703</i>

Documents Collected? YES X (list below) NO ___
Samples Collected? YES ___ (list below) NO X Split Samples: YES ___ NO X
Documents/Samples were: 1) Received no charge X 2) Borrowed ___ 3) Purchased ___
Amount Paid: \$ _____ Method: Cash ___ Voucher ___ To Be Billed ___

The documents and samples described below were collected in connection with the administration and enforcement of the applicable statute under which the information is obtained.

Receipt for the document(s) and/or sample(s) described below is hereby acknowledged:

- 1) NEU-Tri Solvent MSDS (^{5 AND} 10 pgs., front + back)*
- 2) Monthly Solvent Consumption Log - April, 2007 (1 page)*
- 3) Cedar Falls Oil Co. Recycling Manifest (1 page)*
- 4) Site maps (2 pages)*
- 5) DASCO Guard MSDS (5 pages)*
- 6) Manifest and Land Disposal Restriction Notice (3 pages)*

Facility Representative (print) <i>Jeff A Thompson</i>	Signature/Date <i>Jeff A Thompson 8/5/07</i>
Inspector (print) <i>Marilyn Mattione</i>	Signature/Date <i>Marilyn A Mattione Aug 15, 2007</i>
U.S. EPA, Region VII, 901 N. 5th Street, Kansas City, KS 66101	

(rev: 1/20/93)

Attachment 10

Generator Waste Stream Worksheet

1. WASTE STREAM: Spent Solvent

FACILITY DETERMINATION: Hazardous Nonhazardous Not done Inadequate
WASTE CODES: FO02

DETERMINATION METHOD: product knowledge process knowledge testing
Documentation: MSDS

GENERATING PROCESS: Oil waste and solids removed from vapor degreaser using 1,1,2 TCE.

GENERATION RATE: Varies; ~2 times/yr; 188 # in April 2007, 145 # in Nov 2006, 20 gallons in Sept 2006, 20 gallons in March 2005, 20 gallons in May 2004

ON-SITE MANAGEMENT: satellites visually inspected storage visually inspected
55-gallon drums in storage building

OFF-SITE MANAGEMENT / DISPOSITION: picked up by Safety Kleen / Hydrite. Unknown ultimate disposition. Manifest for 2006 shipment indicates destination was WRR Environmental Services in Wisconsin.

2. WASTE STREAM: Rust Inhibitor Waste

FACILITY DETERMINATION: Hazardous Nonhazardous Not done Inadequate ?
WASTE CODES: Not determined

DETERMINATION METHOD: product knowledge process knowledge testing
Documentation: MSDS (No hazardous waste characteristics per MSDS)

GENERATING PROCESS: Change in product use

GENERATION RATE: 1-55 gallon drum one time

ON-SITE MANAGEMENT: satellites visually inspected storage visually inspected
closed 55 gallon drum

OFF-SITE MANAGEMENT / DISPOSITION: Not determined

3. WASTE STREAM: Used oil

FACILITY DETERMINATION: Hazardous Nonhazardous Not done Inadequate
WASTE CODES: NA

DETERMINATION METHOD: product knowledge process knowledge testing
Documentation: MSDS

GENERATING PROCESS: skimming of oil waste from surface of quenchoil, forklift maintenance

GENERATION RATE: Varies; ~55 gallons/month/furnace; 180-450 gallons shipped off site every one to two months
forklifts: 10gts/12months

ON-SITE MANAGEMENT: satellites visually inspected storage visually inspected
collected first in a 55-gallon drum and then transferred to 275 gallon tote container in mfg area for quenchoil; motor oil from forklifts stored in 55-gallon drum in storage area.

OFF-SITE MANAGEMENT / DISPOSITION: Cedar Falls Oil Inc transports for use as fuel in industrial furnace.

1. WASTE STREAM: Furnace Cleanout Waste

FACILITY DETERMINATION: Hazardous Nonhazardous Not done Inadequate
WASTE CODES: NA

DETERMINATION METHOD: product knowledge process knowledge testing
Documentation: MSDS

GENERATING PROCESS: Cleaning out used furnace -> carbon-type scraping and

GENERATION RATE: Every 4-5 years; April 2007 -> 3 55-gallon drums ^{quench tank cleanout}

ON-SITE MANAGEMENT: satellites visually inspected storage visually inspected
closed 55-gallon drums, labeled used oil

OFF-SITE MANAGEMENT / DISPOSITION: Safety Kleen / Hydrite has picked up in past; currently arranging for them to test to make disposal arrangements
↳ not sure how disposed.

2. WASTE STREAM: Quench Spray Waste

FACILITY DETERMINATION: Hazardous Nonhazardous Not done Inadequate
WASTE CODES: NA

DETERMINATION METHOD: product knowledge process knowledge testing
Documentation: MSDS for Neon quenchant

GENERATING PROCESS: Spray and water rinse of rust inhibitor

GENERATION RATE: Not known

ON-SITE MANAGEMENT: satellites visually inspected storage visually inspected NA
discharged to city sewer

OFF-SITE MANAGEMENT / DISPOSITION: discharged to city sewer, no particular approval

3. WASTE STREAM: Scrap Metal

FACILITY DETERMINATION: Hazardous Nonhazardous Not done Inadequate NA
WASTE CODES: _____

DETERMINATION METHOD: product knowledge process knowledge testing
Documentation: _____

GENERATING PROCESS: Construction

GENERATION RATE: Not determined

ON-SITE MANAGEMENT: satellites visually inspected storage visually inspected
Laying on ground outside

OFF-SITE MANAGEMENT / DISPOSITION: To be sold to scrapdealer in Waterloo, IA

1. WASTE STREAM: Waste Lamps

FACILITY DETERMINATION: Hazardous Nonhazardous Not done Inadequate
WASTE CODES: NA

DETERMINATION METHOD: product knowledge process knowledge testing
Documentation: _____

GENERATING PROCESS: Replacing lamps in Fluorescent lighting

GENERATION RATE: Not tracked

ON-SITE MANAGEMENT: satellites visually inspected storage visually inspected Not inspected

OFF-SITE MANAGEMENT / DISPOSITION: Picked up by Safety Kleen; unknown disposition

2. WASTE STREAM: General trash

FACILITY DETERMINATION: Hazardous Nonhazardous Not done Inadequate
WASTE CODES: NA

DETERMINATION METHOD: product knowledge process knowledge testing
Documentation: NA

GENERATING PROCESS: General operations: paper, cardboard, miscellaneous

GENERATION RATE: Not determined

ON-SITE MANAGEMENT: satellites visually inspected storage visually inspected
Waste into dumpster

OFF-SITE MANAGEMENT / DISPOSITION: Paper & cardboard recycled by Waterloo Waste Management, other waste picked up by Waterloo Waste Management uncertain disposition, believe maybe county landfill

3. WASTE STREAM: _____

FACILITY DETERMINATION: Hazardous Nonhazardous Not done Inadequate
WASTE CODES: _____

DETERMINATION METHOD: product knowledge process knowledge testing
Documentation: _____

GENERATING PROCESS: _____

GENERATION RATE: _____

ON-SITE MANAGEMENT: satellites visually inspected storage visually inspected

OFF-SITE MANAGEMENT / DISPOSITION: _____

Attachment 11

Degreasing Solvent MSDS



Material Safety Data Sheet

The Dow Chemical Company

56

Product Name: NEU-TRI* Solvent

Issue Date: 04/20/2006

Print Date: 15 Sep 2006

The Dow Chemical Company encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name

NEU-TRI* Solvent

COMPANY IDENTIFICATION

The Dow Chemical Company
2030 Willard H. Dow Center
Midland, MI 48674
USA

Customer Information Number:

800-258-2436

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact:

989-636-4400

Local Emergency Contact:

989-636-4400

2. Hazards Identification

Emergency Overview

Color: Clear

Physical State: Liquid

Odor: Characteristic

Hazards of product:

WARNING! May cause central nervous system effects; can cause death if too much is breathed. Harmful if inhaled. Harmful if swallowed. May cause eye irritation. May cause skin irritation. Aspiration hazard. Can enter lungs and cause damage. May cause irregular heartbeats based on animal data. Isolate area. Keep upwind of spill. Stay out of low areas. Toxic fumes may be released in fire situations.

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects

Eye Contact: May cause pain disproportionate to the level of irritation to eye tissues. May cause slight eye irritation. Corneal injury is unlikely. Vapor may cause eye irritation experienced as mild discomfort and redness.

* Indicates a Trademark

OCT 10 2006
905

Skin Contact: Prolonged or repeated contact may cause skin irritation. May cause drying and flaking of the skin. May cause more severe response on covered skin (under clothing, gloves).

Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Trichloroethylene may be absorbed through the skin and may cause numbness in fingers immersed in the liquid.

Inhalation: In confined or poorly ventilated areas, vapor can readily accumulate and can cause unconsciousness and death. Excessive exposure may cause irritation to upper respiratory tract (nose and throat). Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). May cause alcohol intolerance often manifested by temporary reddening of the skin called 'degreaser's flush'. Minimal anesthetic or irritant effects may be seen around 200-400 ppm trichloroethylene. Levels in the range of 1000-2000 ppm may rapidly cause dizziness and drunkenness. Progressively higher levels or longer exposure may cause unconsciousness and death and may be immediately hazardous to life.

Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause serious injury, even death. Aspiration into the lungs may occur during ingestion or vomiting, resulting in rapid absorption and injury to other body systems.

Effects of Repeated Exposure: For the major component(s): In animals, effects have been reported on the following organs: Kidney. Liver. Central nervous system. Peripheral nervous system. Alcohol consumed before or after exposure may increase adverse effects. Trichloroethylene is reported to have caused hearing loss in laboratory animals upon repeated exposure to 2500 ppm or higher (orders of magnitude greater than the current occupational exposure standards). However, the relevance of this to humans is unknown.

Cancer Information: Tumors were observed in mice given large doses of trichloroethylene. Data suggest a nongenotoxic mechanism for tumor formation that implies that nontoxic doses of trichloroethylene should pose little or no carcinogenic hazard. A very low incidence of tumors has been observed in male rats at high levels of trichloroethylene which caused reduced survival, rendering these studies inadequate. Limited epidemiology data have shown a weak association between trichloroethylene exposure and renal cancer. Butylene oxide has been shown to produce benign and malignant tumors in rats but not mice. These tumors occurred only following high exposure levels which first produced chronic upper respiratory tract irritation. Butylene oxide is not believed to pose a carcinogenic risk to man when handled as recommended.

Birth Defects/Developmental Effects: For the major component(s): Did not cause birth defects in laboratory animals. Has been toxic to the fetus in lab animals at doses toxic to the mother.

3. Composition Information

Component	CAS #	Amount
1,1,2-Trichloroethylene	79-01-6	99.4 %
1,2-Butylene oxide	106-88-7	0.5 %
Stabilizers	not applicable	0.1 %

4. First-aid measures

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Skin Contact: Wash skin with plenty of water.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Ingestion: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

Notes to Physician: Because rapid absorption may occur through the lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless

absolutely necessary. Alcohol consumed before or after exposure may increase adverse effects. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Medical Conditions Aggravated by Exposure: Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Water fog, applied gently may be used as a blanket for fire extinguishment.

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

Unusual Fire and Explosion Hazards: Container may vent and/or rupture due to fire. Although this material does not have a flash point, it can burn at room temperature. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas.

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Hydrogen chloride. Carbon monoxide. Carbon dioxide. Combustion products may include trace amounts of: Phosgene. Chlorine.

6. Accidental Release Measures

Steps to be Taken if Material is Released or Spilled: Small spills: Contain spilled material if possible. Absorb with materials such as: Vermiculite. Bentonite. Sawdust. Collect in suitable and properly labeled containers. Large spills: Dike area to contain spill. Pump into suitable and properly labeled containers. Suitable containers include: Metal drums. See Section 13, Disposal Considerations, for additional information.

Personal Precautions: Evacuate area. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. Only trained and properly protected personnel must be involved in clean-up operations. Confined space entry procedures must be followed before entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling, for additional precautionary measures.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling

General Handling: Handling in closed systems is recommended. Avoid breathing vapor. Do not swallow. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Do not enter confined spaces unless adequately ventilated. To avoid uncontrolled emissions, vent vapor from container to storage tank. Vapors of this product are heavier than air and lethal concentrations of vapors can collect in low, confined and unventilated spaces such as tanks, pits, small rooms and even in equipment (degreasers) that is used for degreasing metal parts. Do not enter these confined spaces

where vapors of this product are suspected unless special breathing apparatus is used and an observer is present for assistance. When using do not eat, drink or smoke. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Other Precautions: When appropriate, unique handling information for containers can be found on the product label.

Storage

Store in a cool, dry place. Store away from direct sunlight. Do not store in: Zinc. Aluminum. Aluminum alloys. Plastic. Product should not be packaged in aluminum aerosol cans or with finely divided aluminum or its alloys in an aerosol can. Additional storage and handling information on this product may be obtained by calling your Dow sales or customer service contact. Ask for a product brochure.

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
1,1,2-Trichloroethylene	ACGIH	TWA	50 ppm
	ACGIH	STEL	100 ppm
	OSHA/Z2	TWA	100 ppm
	ACGIH (NIC) *	STEL	25 ppm
	ACGIH (NIC) *	TWA	10 ppm
	OSHA/Z2	Ceiling	200 ppm
	OSHA/Z2	MAX. CONC	300 ppm 5 minutes in any 2 hours
	Dow IHG	TWA	5 ppm
1,2-Butylene oxide	WEEL	TWA	5.9 mg/m ³ 2 ppm

* The ACGIH TLV Committee has placed this substance on the .Notice of Intended Changes. (NIC) list with a proposed change in the Adopted TLV values. Although this change is proposed, the values are considered trial TLVs, and may, or may not, be adopted at some time in the future.

Personal Protection

Eye/Face Protection: Use safety glasses. If exposure causes eye discomfort, use a full-face respirator.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Viton. Polyvinyl alcohol ("PVA"). Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Butyl rubber. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Avoid gloves made of: Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use an approved air-purifying or positive-pressure supplied-air respirator depending on the potential airborne concentration. For emergency and other conditions where the exposure guideline may be exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply. The following should be effective types of air-purifying respirators: Organic vapor cartridge.

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls

Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Lethal concentrations may exist in areas with poor ventilation.

9. Physical and Chemical Properties

Physical State	Liquid
Color	Clear
Odor	Characteristic
Flash Point - Closed Cup	Tag Closed Cup ASTM D56 (none)
Flammable Limits In Air	Lower: 8.0 %(V) Literature Upper: 44.8 %(V) Literature
Autoignition Temperature	420 °C (788 °F) Literature
Vapor Pressure	54.25 mmHg Literature
Boiling Point (760 mmHg)	87 °C (189 °F) Literature .
Vapor Density (air = 1)	4.5 Literature
Specific Gravity (H2O = 1)	1.46 Literature
Freezing Point	-87 °C (-125 °F) Literature
Melting Point	Not applicable
Solubility in Water (by weight)	0.1 % @ 25 °C
pH	Not applicable
Molecular Weight	131.4 g/mol Literature
Dynamic Viscosity	0.58 mPa.s @ 20 °C Literature

10. Stability and Reactivity

Stability/Instability

Stable under recommended storage conditions. See Storage, Section 7.

Conditions to Avoid: Exposure to elevated temperatures can cause product to decompose. Avoid open flames, welding arcs, or other high temperature sources which induce thermal decomposition. Avoid direct sunlight or ultraviolet sources.

Incompatible Materials: Avoid contact with: Strong bases. Strong oxidizers. Reaction with strong alkali metal hydroxides will form dichloroacetylene which can spontaneously ignite in air. Avoid contact with metals such as: Zinc powders. Aluminum powders. Magnesium powders. Potassium. Sodium. Avoid prolonged contact with or storage in aluminum or its alloys. Avoid unintended contact with: Amines.

Hazardous Polymerization

Will not occur.

Thermal Decomposition

Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Hydrogen chloride. Decomposition products can include trace amounts of: Chlorine. Phosgene.

11. Toxicological Information

Acute Toxicity Ingestion

LD50, Rat 4,920 mg/kg

Skin Absorption

Approximate. LD50, Rabbit 10,000 mg/kg

Inhalation

LC50, 4 h, Rat 12,500 ppm

Repeated Dose Toxicity

For the major component(s): In animals, effects have been reported on the following organs: Kidney. Liver. Central nervous system. Peripheral nervous system. Alcohol consumed before or after exposure may increase adverse effects. Trichloroethylene is reported to have caused hearing loss in laboratory animals upon repeated exposure to 2500 ppm or higher (orders of magnitude greater than the current occupational exposure standards). However, the relevance of this to humans is unknown.

Chronic Toxicity and Carcinogenicity

Tumors were observed in mice given large doses of trichloroethylene. Data suggest a nongenotoxic mechanism for tumor formation that implies that nontoxic doses of trichloroethylene should pose little or no carcinogenic hazard. A very low incidence of tumors has been observed in male rats at high levels of trichloroethylene which caused reduced survival, rendering these studies inadequate. Limited epidemiology data have shown a weak association between trichloroethylene exposure and renal cancer. Butylene oxide has been shown to produce benign and malignant tumors in rats but not mice. These tumors occurred only following high exposure levels which first produced chronic upper respiratory tract irritation. Butylene oxide is not believed to pose a carcinogenic risk to man when handled as recommended.

Carcinogenicity Classifications:

Component	List	Classification
1,1,2-Trichloroethylene	ACGIH	Not suspected as a human carcinogen.; Group A5
	ACGIH (NIC) *	Suspected human carcinogen.; Group A2 The ACGIH TLV Committee has placed this substance on the "Notice of Intended Changes" (NIC) list with a proposed change in the carcinogenicity classification. Although this change is proposed, the classification is considered trial and may, or may not, be adopted at some time in the future.
	ACGIH (NIC) *	
1,2-Butylene oxide	NTP	Anticipated carcinogen.
	IARC	Probable carcinogen.; 2A
	IARC	Possible carcinogen.; 2B

Developmental Toxicity

For the major component(s): Did not cause birth defects in laboratory animals. Has been toxic to the fetus in lab animals at doses toxic to the mother.

Reproductive Toxicity

For the major component(s): In animal studies, did not interfere with reproduction.

Genetic Toxicology

For the major component(s): Trichloroethylene. In vitro genetic toxicity studies were negative. For the minor component(s): 1,2-Butylene oxide. In vitro genetic toxicity studies were positive. For the major component(s): Trichloroethylene. Animal genetic toxicity studies were predominantly negative. Pure trichloroethylene (without additives) lacks genetic toxicity potential in most tests. For the minor component(s): 1,2-Butylene oxide. Animal genetic toxicity studies were negative.

12. Ecological Information

CHEMICAL FATE

Data for Component: **1,1,2-Trichloroethylene**

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is high (Koc between 50 and 150).

Henry's Law Constant (H): 1.03E-2 atm*m3/mole Measured

Partition coefficient, n-octanol/water (log Pow): 2.42 Measured
Partition coefficient, soil organic carbon/water (Koc): 41 - 150 Estimated
Bioconcentration Factor (BCF): 17 - 90; fish; Measured

Persistence and Degradability

Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. Biodegradation rate may increase in soil and/or water with acclimation. Biodegradation may occur under both aerobic and anaerobic conditions (in the presence or absence of oxygen).

Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
8.05e-13 cm3/s	13 d	Estimated

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
2.4 %	14 d	OECD 301C Test

Chemical Oxygen Demand: 0.19 mg/mg

Theoretical Oxygen Demand: 0.55 mg/mg

Data for Component: 1,2-Butylene oxide

Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).

Henry's Law Constant (H): 2.02E-4 atm*m3/mole; 25 °C Estimated

Partition coefficient, n-octanol/water (log Pow): 0.68 Measured

Partition coefficient, soil organic carbon/water (Koc): 3 Estimated

Persistence and Degradability

Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%).

Stability in Water (1/2-life):

11 d

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method
90 %	28 d	OECD 301A Test

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
	28 %		75 %

Theoretical Oxygen Demand: 2.44 mg/mg

ECOTOXICITY

Data for Component: 1,1,2-Trichloroethylene

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, fathead minnow (Pimephales promelas), 96 h: 41 - 67 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, water flea Daphnia magna, 48 h: 2.2 - 100 mg/l

LC50, grass shrimp (Palaemonetes pugio), 96 h: 2 mg/l

Aquatic Plant Toxicity

EC50, algae, 24 h: 410 mg/l

Toxicity to Micro-organisms

EC50; activated sludge, respiration inhibition: 260 mg/l

Data for Component: 1,2-Butylene oxide

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, fathead minnow (Pimephales promelas): > 100 mg/l

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Aquatic Invertebrate Acute Toxicity

EC50, water flea Daphnia magna, immobilization: 70 mg/l

Aquatic Plant Toxicity

EC50, alga Scenedesmus sp., biomass growth inhibition: > 500 mg/l

13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. DOW HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Group at 1-800-258-2436 or 1-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details. DISPOSAL OF CONTACT WATER: Process water in contact with solvent and/or water separators of cleaning or distillation equipment should be treated as hazardous waste. Do not discharge water from water separators to drain.

14. Transport Information**DOT Non-Bulk**

Proper Shipping Name: TRICHLOROETHYLENE

Hazard Class: 6.1 ID Number: UN1710 Packing Group: PG III

DOT Bulk

Proper Shipping Name: TRICHLOROETHYLENE

Hazard Class: 6.1 ID Number: UN1710 Packing Group: PG III

IMDG

Proper Shipping Name: TRICHLOROETHYLENE

Hazard Class: 6.1 ID Number: UN1710 Packing Group: PG III

EMS Number: F-A,S-A

Marine pollutant.: No

ICAO/IATA

Proper Shipping Name: TRICHLOROETHYLENE

Hazard Class: 6.1 ID Number: UN1710 Packing Group: PG III

Cargo Packing Instruction: 612

Passenger Packing Instruction: 605

Additional Information

Reportable quantity: 100 lb – TRICHLOROETHYLENE

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	Yes
Fire Hazard	No
Reactive Hazard	No
Sudden Release of Pressure Hazard	No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Component	CAS #	Amount
1,1,2-Trichloroethylene	79-01-6	99.4%
1,2-Butylene oxide	106-88-7	0.5%

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
1,1,2-Trichloroethylene	79-01-6	99.4%

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

This product contains the following substances which are subject to CERCLA Section 103 reporting requirements and which are listed in 40 CFR 302.4.

Component	CAS #	Amount
1,1,2-Trichloroethylene	79-01-6	99.4%
1,2-Butylene oxide	106-88-7	0.5%
Inhibitor package	Trade secret	< 1.0 %

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Component	CAS #	Amount
1,1,2-Trichloroethylene	79-01-6	99.4%

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

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16. Other Information**Hazard Rating System**

NFPA	Health	Fire	Reactivity
	2	1	0

Recommended Uses and Restrictions

Industrial solvent. Dow does NOT recommend the use of this product in applications where: - soil or ground water contamination is likely (direct applications to the ground, sink drains, sewers, or septic tanks). - where over exposure is likely (small rooms or confined space, or where there would be inadequate ventilation). - where skin contact is likely (adhesive tape removal from skin or as hand cleaner to remove oils and greases). - where there is direct food contact. - where vapor concentrations would be in the flammable range. - where disposal of waste would pose an environmental or health risk. - where chemical reactivity poses a danger (contact with strong alkali, or in areas where welding is done).

Revision

Identification Number: 50039 / 1001 / Issue Date 04/20/2006 / Version: 6.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation

The Dow Chemical Company urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

Attachment 12

Solvent Consumption Log

ADVANCED HEAT TREAT CORP.
MONTHLY SOLVENT CONSUMPTION LOG

MONTH: April 2007 MACHINE I.D.#: LARGE / SMALL FACILITY: IA / MI (Circle appropriate vessel or facility.)

DAY	AMOUNT OF SOLVENT ADDED (lbs. / gal.)	AMOUNT OF SOLVENT DRAINED	AMOUNT OF SOLIDS REMOVED	INITIALS
1				
2	42	0	0	JL
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13	25	0	0	JL
14				
15				
16				
17				
18				
19				
20				
21	14	0	0	JL
22				
23				
24				
25				
26	324 lbs	188 lbs	0	AL BOM
27				
28				
29				
30				
31				
TOTAL	A	B	C	

Total monthly solvent usage A - (B + C): _____

Revised: 11 March 1997

Z.53

3 month rolling average:

Yearly total:

Attachment 12 page 1 of 1

Attachment 13

Spent Solvent Shipment Record



STATE OF WISCONSIN
Chapter 291, Wis. Stats.
Form 4400-66P Rev. 1-99
**ALL COPIES MUST BE LEGIBLE,
PLEASE TYPE**

State of Wisconsin
Department of Natural Resources
Bureau of Waste Management
Box 8094
Madison, WI 53708

FOR DNR USE ONLY

Form designed for use on elite (12-pitch) typewriter.

Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. TAD056504186	Manifest Document No. 1 017 311 31	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address ADVANCED HEAT TREAT CORP 2839 BURTON AVE., WATERLOO, IA 50703		Site Location If Different		A. State Manifest Document Number WIK 407313		
4. Generator's Phone (319-232-5221)		6. US EPA ID Number TAT200010593		B. State Generator's ID		
5. Transporter 1 Company Name HYDRITE CHEMICAL - WL		7. Transporter 2 Company Name TRANSWOOD		C. State Transporter's ID UPW100011MN		
9. Designated Facility Name and Site Address WRR ENVIRONMENTAL SERVICES 5200 STATE RD. 93 EAU CLAIRE, WI 54701		10. US EPA ID Number WID990829475		D. Transporter's Phone 319-232-9731		
				E. State Transporter's ID UPW05407770E		
				F. Transporter's Phone 800-220-1555		
				G. State Facility's ID		
				H. Facility's Phone 715-834-9624		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, WASTE TRICHLOROETHYLENE, 6.1, UN1710, PGIII, (FO01)		991PM		20.055	G	FO01
b.						
c.						
d.						
J. Additional Descriptions for Materials Listed Above a) D022 D039 D040				K. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information a) 113405WLA185950 EMERGENCY PHONE NUMBER: 319-232-5221						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations and according to the requirements of the Wisconsin Department of Natural Resources. If I am a large quantity generator, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name & Position Title Frank Kane - Maintenance Manager		Signature <i>[Signature]</i>		Date Month Day Year 01/17/2006		
17. TRANSPORTER 1 Acknowledgement of Receipt of Materials		Signature <i>[Signature]</i>		Date Month Day Year 01/17/2006		
Printed/Typed Name & Position Title Mike Schoover, driver		Signature <i>[Signature]</i>		Date Month Day Year 		
18. TRANSPORTER 2 Acknowledgement of Receipt of Materials		Signature 		Date Month Day Year 		
Printed/Typed Name & Position Title 		Signature 		Date Month Day Year 		
19. Discrepancy Indication Space 2						
20. FACILITY OWNER OR OPERATOR: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.		Signature 		Date Month Day Year 		
Printed/Typed Name & Position Title 		Signature 		Date Month Day Year 		

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LAND DISPOSAL NOTIFICATION AND CERTIFICATION FORM

GENERATOR	HYDRITE AUTHORIZATION #	STATE MANIFEST #
Advanced Heat Treat	113005-WL-185950	WIK 407313
EPA WASTE CODE NUMBERS		
F001	D022	D039
	D040	

Is this waste Non-wastewater or Wastewater? (see 40 CFR 268.2) Check ONE
 Indicate all the Universal Treatment Standards and/ or EPA Waste Codes as they apply to your waste by checking the appropriate boxes in sections A, B, C, D.
 For those treatment standards not listed in sections A, B, C, or D, list their waste Code, Regulated Constituent, and treatment level in Section E.

SECTION A IGNITABLE WASTE TREATMENT STANDARDS			
WASTE CODE	Waste Description and Treatment/Regulatory Subcategory	WASTEWATER	NON-WASTEWATER
		Concentration in mg/L or Technology Code	Concentration in mg/L, unless noted as "mg/L TCLP" or Technology Code
<input type="checkbox"/> D001	Ignitable Characteristic Wastes, except for the §261.21(a)(1) High TOC Subcategory, that are managed in non-CWA / non-CWA-equivalent / non-Class I SDWA systems.	DEACT and meet §268.48 Standards; or RORGS; or CMBST	DEACT and meet §268.48 standards or RORGS; or CMBST
<input type="checkbox"/> D001	High TOC Ignitable Characteristic Liquids Subcategory based on 40 CFR 261.21(a)(1) - Greater than or equal to 10% total organic carbon. (Note: This subcategory consists of non-wastewater only.)	N/A	RORGS; or CMBST

SECTION B CORROSIVE WASTE TREATMENT STANDARDS			
<input type="checkbox"/> D002	Corrosive Characteristic Wastes that are managed in non-CWA / non-CWA equivalent / non-Class I SDWA systems.	DEACT and meet §268.48 standards	DEACT and meet §268.48 standards
<input type="checkbox"/> D002	Corrosive Characteristic Wastes that are managed in CWA, CWA-equivalent, or Class I SDWA systems.	DEACT	DEACT

SECTION C METAL WASTE TREATMENT STANDARDS								
REGULATED CONSTITUENT	WASTEWATER mg/L	NON-WASTEWATER mg/L-TCLP	REGULATED CONSTITUENT	WASTEWATER mg/L	NON-WASTEWATER mg/L-TCLP	REGULATED CONSTITUENT	WASTEWATER mg/L	NON-WASTEWATER mg/L-TCLP
<input type="checkbox"/> Antimony	1.9	1.15	<input type="checkbox"/> Chromium (total) (D007)	2.77	0.60	<input type="checkbox"/> Selenium (D010)	0.82	5.7
<input type="checkbox"/> Arsenic (D004)	1.4	5.0	<input type="checkbox"/> Lead (D008)	0.69	0.75	<input type="checkbox"/> Silver (D011)	0.43	0.14
<input type="checkbox"/> Barium (D005)	1.2	21.0	<input type="checkbox"/> Mercury (non-wastewater from Retort)	N/A	0.20	<input type="checkbox"/> Thallium	1.4	0.20
<input type="checkbox"/> Beryllium	0.82	1.22	<input type="checkbox"/> Mercury - all others	0.15	0.025	<input type="checkbox"/> Vanadium	4.3	1.6
<input type="checkbox"/> Cadmium (D006)	0.69	0.11	<input type="checkbox"/> Nickel	3.98	11.0	<input type="checkbox"/> Zinc	2.61	4.3

SECTION D WASTE TREATMENT STANDARDS								
REGULATED CONSTITUENT	WASTEWATER mg/L	NON-WASTEWATER mg/kg (*mg/L-TCLP)	REGULATED CONSTITUENT	WASTEWATER mg/L	NON-WASTEWATER mg/kg (*mg/L-TCLP)	REGULATED CONSTITUENT	WASTEWATER mg/L	NON-WASTEWATER mg/kg (*mg/L-TCLP)
<input type="checkbox"/> Acetone	0.28	160	<input type="checkbox"/> 1,2 Dichloroethane	0.21	6.0	<input type="checkbox"/> Pyridine	0.014	16
<input type="checkbox"/> Benzene	0.14	10	<input type="checkbox"/> Ethyl acetate	0.34	33	<input checked="" type="checkbox"/> Tetrachloroethylene	0.056	6.0
<input type="checkbox"/> n-Butyl alcohol	5.6	2.6	<input type="checkbox"/> Ethyl Benzene	0.057	10	<input type="checkbox"/> Toluene	0.080	10
<input type="checkbox"/> Carbon disulfide	3.8	N/A	<input type="checkbox"/> Ethyl ether	0.12	160	<input type="checkbox"/> 1,1,1-Trichloroethane	0.054	6.0
<input type="checkbox"/> Carbon tetrachloride	0.057	6.0	<input type="checkbox"/> Isobutyl alcohol	5.6	170	<input type="checkbox"/> 1,1,2-Trichloroethane	0.054	6.0
<input type="checkbox"/> Chlorobenzene	0.057	6.0	<input type="checkbox"/> Methanol	5.6	0.75*	<input type="checkbox"/> 1,1,2-Trichloro-1,2,2 trifluoroethane	0.057	3.0
<input checked="" type="checkbox"/> Chloroform	0.046	6.0	<input type="checkbox"/> Methylene chloride	0.089	30	<input checked="" type="checkbox"/> Trichloroethylene	0.054	6.0
<input type="checkbox"/> O-Cresols	0.11	5.6	<input type="checkbox"/> Methyl ethyl ketone	0.28	36	<input type="checkbox"/> Trichloromonofluoromethane	0.020	30
<input type="checkbox"/> M & P Cresols	0.77	5.6	<input type="checkbox"/> Methyl isobutyl ketone	0.14	33	<input type="checkbox"/> Vinyl chloride	0.27	6.0
<input type="checkbox"/> Cyclohexanone	0.36	0.75*	<input type="checkbox"/> Nitrobenzene	0.068	14	<input type="checkbox"/> Xylene	0.32	30

SECTION E WASTE TREATMENT STANDARDS NOT LISTED ABOVE			
WASTE CODE	REGULATED CONSTITUENT	WASTEWATER	NON-WASTEWATER

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- SECTION F CALIFORNIA LIST WASTES**
- Liquid hazardous wastes having a pH less than or equal to two (2)
 - Liquid hazardous wastes containing PCBs at a concentration greater than or equal to 50 ppm
 - Liquid hazardous wastes that contain HOCs in total concentration greater than or equal to 1000 mg/L
 - Nonliquid hazardous wastes containing HOCs in total concentration greater than or equal to 1000 mg/kg
 - Free (amenable to chlorination) cyanides greater than or equal to 1000 mg/L
 - One or more of the following metals greater than or equal to the following: Arsenic and/or compounds: 500 mg/L; Cadmium and/or compounds: 100 mg/L; Chromium and/or compounds: 500 mg/L; Lead and/or compounds: 500 mg/L; Mercury and/or compounds: 20 mg/L; Nickel and/or compounds: 134 mg/L; Selenium and/or compounds: 100 mg/L; Thallium and/or compounds: 130 mg/L.

SECTION G UNDERLYING HAZARDOUS CONSTITUENTS

If there are underlying hazardous constituents of concern which do not meet the treatment standard of 40 CFR 268.48, Table UST-Universal Treatment Standard, then mark all underlying constituents on page #2.
 D001, D002, or D012-D043 to be treated in a non-CWA system, and that contain underlying hazardous constituents - Check all underlying hazardous constituents present.
 An underlying hazardous constituent is defined at 40 CFR 268.2(i) as any constituent listed in the universal treatment standards table (40 CFR 268.48), present at a concentration above the constituent-specific treatment standard. These constituents and their treatment standards are listed on next page. D001 wastes (only) treated by incineration, fuels substitution, or organics recovery system do not require identification of underlying hazardous constituents.

\$268.48 TABLE UTS — UNIVERSAL TREATMENT STANDARDS

Regulated constituent - common name	Wastewater standard. Concentration in mg/L	Nonwastewater std. Con. in mg/kg* unless noted as "mg/L TCLP"	Regulated constituent - common name	Wastewater standard. Concentration in mg/L	Nonwastewater std. Con. in mg/kg* unless noted as "mg/L TCLP"	Regulated constituent - common name	Wastewater standard. Concentration in mg/L	Nonwastewater std. Con. in mg/kg* unless noted as "mg/L TCLP"
<input type="checkbox"/> Acenaphthylene	0.059	3.4	<input type="checkbox"/> 1,2-Dichloroethane	0.21	6.0	<input type="checkbox"/> Nitrobenzene	0.068	14
<input type="checkbox"/> Acenaphthene	0.059	3.4	<input type="checkbox"/> 1,1-Dichloroethylene	0.025	6.0	<input type="checkbox"/> 5-Nitro-o-toluidine	0.32	28
<input type="checkbox"/> Acetone	0.28	160	<input type="checkbox"/> trans-1,2-Dichloroethylene	0.054	30	<input type="checkbox"/> o-Nitrophenol	0.028	13
<input type="checkbox"/> Acetonitrile	5.6	1.8	<input type="checkbox"/> 2,4-Dichlorophenol	0.044	14	<input type="checkbox"/> p-Nitrophenol	0.12	29
<input type="checkbox"/> Acetophenone	0.010	9.7	<input type="checkbox"/> 2,6-Dichlorophenol	0.044	14	<input type="checkbox"/> N-Nitrosodiethylamine	0.40	28
<input type="checkbox"/> 2-Acetylaminofluorene	0.059	140	<input type="checkbox"/> 1,2-Dichloropropane	0.85	18	<input type="checkbox"/> N-Nitrosodimethylamine	0.40	2.3
<input type="checkbox"/> Acrolein	0.29	NA	<input type="checkbox"/> cis-1,3-Dichloropropylene	0.036	18	<input type="checkbox"/> N-Nitroso-di-n-butylamine	0.40	17
<input type="checkbox"/> Acrylamide	19	23	<input type="checkbox"/> trans-1,3-Dichloropropylene	0.036	18	<input type="checkbox"/> N-Nitrosomethylethylamine	0.40	2.3
<input type="checkbox"/> Acrylonitrile	0.24	84	<input type="checkbox"/> Dieldrin	0.017	0.13	<input type="checkbox"/> N-Nitrosomorpholine	0.40	2.3
<input type="checkbox"/> Aldrin	0.021	0.066	<input type="checkbox"/> Diethyl phthalate	0.20	28	<input type="checkbox"/> N-Nitrosopiperidine	0.013	35
<input type="checkbox"/> 4-Aminobiphenyl	0.13	NA	<input type="checkbox"/> 2,4-Dimethyl phenol	0.036	14	<input type="checkbox"/> N-Nitrosopyrrolidine	0.013	35
<input type="checkbox"/> Aniline	0.81	14	<input type="checkbox"/> Dimethyl phthalate	0.047	28	<input type="checkbox"/> Parathion	0.014	4.6
<input type="checkbox"/> Anthracene	0.059	3.4	<input type="checkbox"/> Di-n-butyl phthalate	0.057	28	<input type="checkbox"/> Total PCBs (sum of all PCB isomers, or all Aroclors)	0.10	10
<input type="checkbox"/> Aramite	0.36	NA	<input type="checkbox"/> 1,4-Dinitrobenzene	0.32	2.3	<input type="checkbox"/> Pentachlorobenzene	0.055	10
<input type="checkbox"/> alpha-BHC	0.00014	0.066	<input type="checkbox"/> 4,6-Dinitro-o-cresol	0.28	160	<input type="checkbox"/> PeCDDs (All Pentachlorodibenzo-p-dioxins)	0.000063	0.001
<input type="checkbox"/> beta-BHC	0.00014	0.066	<input type="checkbox"/> 2,4-Dinitrophenol	0.12	160	<input type="checkbox"/> PeCDFs (All Pentachlorodibenzofurans)	0.000035	0.001
<input type="checkbox"/> delta-BHC	0.023	0.066	<input type="checkbox"/> 2,4-Dinitrotoluene	0.32	140	<input type="checkbox"/> Pentachloroethane	0.055	6.0
<input type="checkbox"/> gamma-BHC	0.0017	0.066	<input type="checkbox"/> 2,6-Dinitrotoluene	0.55	28	<input type="checkbox"/> Pentachloronitrobenzene	0.055	4.8
<input type="checkbox"/> Benzene	0.14	10	<input type="checkbox"/> Di-n-octyl phthalate	0.017	28	<input type="checkbox"/> Pentachlorophenol	0.089	7.4
<input type="checkbox"/> Benz(a)anthracene	0.059	3.4	<input type="checkbox"/> p-Dimethylaminoazobenzene	0.13	NA	<input type="checkbox"/> Phenacetin	0.081	16
<input type="checkbox"/> Benzal chloride	0.055	6.0	<input type="checkbox"/> Di-n-propylnitrosamine	0.40	14	<input type="checkbox"/> Phenanthrene	0.059	5.6
<input type="checkbox"/> Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene).	0.11	6.8	<input type="checkbox"/> 1,4-Dioxane	NA	170	<input type="checkbox"/> Phenol	0.039	6.2
<input type="checkbox"/> Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene).	0.11	6.8	<input type="checkbox"/> Diphenylamine (difficult to distinguish from diphenylnitrosamine).	0.92	13	<input type="checkbox"/> Phorate	0.021	4.6
<input type="checkbox"/> Benzo(g,h,i)perylene	0.0055	1.8	<input type="checkbox"/> Diphenylnitrosamine (difficult to distinguish from diphenylamine).	0.92	13	<input type="checkbox"/> Phthalic Acid	0.055	28
<input type="checkbox"/> Benzo(a)pyrene	0.061	3.4	<input type="checkbox"/> 1,2-Diphenylhydrazine	0.087	NA	<input type="checkbox"/> Phthalic anhydride	0.055	28
<input type="checkbox"/> Bromodichloromethane	0.35	15	<input type="checkbox"/> Disulfoton	0.017	6.2	<input type="checkbox"/> Pronamide	0.093	1.5
<input type="checkbox"/> Methyl bromide (Bromomethane)	0.11	15	<input type="checkbox"/> Endosulfan I	0.023	0.066	<input type="checkbox"/> Pyrene	0.067	8.2
<input type="checkbox"/> 4-Bromophenyl phenyl ether	0.055	15	<input type="checkbox"/> Endosulfan II	0.029	0.13	<input type="checkbox"/> Pyridine	0.014	16
<input type="checkbox"/> n-Butyl alcohol	5.6	2.6	<input type="checkbox"/> Endosulfan sulfate	0.029	0.13	<input type="checkbox"/> Safrrole	0.081	22
<input type="checkbox"/> Butyl benzyl phthalate	0.017	28	<input type="checkbox"/> Endrin	0.0028	0.13	<input type="checkbox"/> Silvex (2,4,5-TP)	0.72	7.9
<input type="checkbox"/> 2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	0.066	2.5	<input type="checkbox"/> Endrin aldehyde	0.025	0.13	<input type="checkbox"/> 2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	0.72	7.9
<input type="checkbox"/> Carbon disulfide	3.8	4.8 mg/L TCLP	<input type="checkbox"/> Ethyl acetate	0.34	33	<input type="checkbox"/> 1,2,4,5-Tetrachlorobenzene	0.055	14
<input type="checkbox"/> Carbon tetrachloride	0.057	6.0	<input type="checkbox"/> Ethyl cyanide (Propanenitrile)	0.24	360	<input type="checkbox"/> TCDDs (All Tetrachlorodibenzo-p-dioxins)	0.000063	0.001
<input type="checkbox"/> Chlordane (alpha and gamma isomers)	0.0033	0.26	<input type="checkbox"/> Ethyl benzene	0.057	10	<input type="checkbox"/> TCDFs (All Tetrachlorodibenzofurans)	0.000063	0.001
<input type="checkbox"/> p-Chloroaniline	0.46	16	<input type="checkbox"/> Ethyl ether	0.12	160	<input type="checkbox"/> 1,1,1,2-Tetrachloroethane	0.057	6.0
<input type="checkbox"/> Chlorobenzene	0.057	6.0	<input type="checkbox"/> bis(2-Ethylhexyl) phthalate	0.28	28	<input type="checkbox"/> 1,1,2,2-Tetrachloroethane	0.057	6.0
<input type="checkbox"/> Chlorobenzilate	0.10	NA	<input type="checkbox"/> Ethyl methacrylate	0.14	160	<input type="checkbox"/> Tetrachloroethylene	0.056	6.0
<input type="checkbox"/> 2-Chloro-1,3-butadiene	0.057	0.28	<input type="checkbox"/> Ethylene oxide	0.12	NA	<input type="checkbox"/> 2,3,4,6-Tetrachlorophenol	0.030	7.4
<input type="checkbox"/> Chlorodibromomethane	0.057	15	<input type="checkbox"/> Famphur	0.017	15	<input type="checkbox"/> Toluene	0.080	10
<input type="checkbox"/> Chloroethane	0.27	6.0	<input type="checkbox"/> Fluoranthene	0.068	3.4	<input type="checkbox"/> Toxaphene	0.0095	2.6
<input type="checkbox"/> bis(2-Chloroethoxy)methane	0.036	7.2	<input type="checkbox"/> Fluorene	0.059	3.4	<input type="checkbox"/> Bromoform (Tribromomethane)	0.63	15
<input type="checkbox"/> bis(2-Chloroethyl-ether)	0.033	6.0	<input type="checkbox"/> Heptachlor	0.0012	0.066	<input type="checkbox"/> 1,2,4-Trichlorobenzene	0.055	19
<input type="checkbox"/> Chloroform	0.046	6.0	<input type="checkbox"/> Heptachlor epoxide	0.016	0.066	<input type="checkbox"/> 1,1,1-Trichloroethane	0.054	6.0
<input type="checkbox"/> bis(2-Chloroisopropyl)ether	0.055	7.2	<input type="checkbox"/> Hexachlorobenzene	0.055	10	<input type="checkbox"/> 1,1,2-Trichloroethane	0.054	6.0
<input type="checkbox"/> p-Chloro-m-cresol	0.018	14	<input type="checkbox"/> Hexachlorobutadiene	0.055	5.6	<input type="checkbox"/> Trichloroethylene	0.054	6.0
<input type="checkbox"/> 2-Chloroethyl vinyl ether	0.062	NA	<input type="checkbox"/> Hexachlorocyclopentadiene	0.057	2.4	<input type="checkbox"/> Trichloromonofluoromethane	0.020	30
<input type="checkbox"/> Chloromethane (Methyl chloride)	0.19	30	<input type="checkbox"/> HxCDDs (All Hexachlorodibenzo-p-dioxins)	0.000063	0.001	<input type="checkbox"/> 2,4,5-Trichlorophenol	0.18	7.4
<input type="checkbox"/> 2-Chloronaphthalene	0.055	5.6	<input type="checkbox"/> HxCDFs (All Hexachlorodibenzofurans)	0.000063	0.001	<input type="checkbox"/> 2,4,6-Trichlorophenol	0.035	7.4
<input type="checkbox"/> 2-Chlorophenol	0.044	5.7	<input type="checkbox"/> Hexachloroethane	0.055	30	<input type="checkbox"/> 1,2,3-Trichloropropane	0.85	30
<input type="checkbox"/> 3-Chloropropylene	0.036	30	<input type="checkbox"/> Hexachloropropylene	0.035	30	<input type="checkbox"/> 1,1,2-Trichloro-1,2,2-trifluoroethane	0.057	30
<input type="checkbox"/> Chrysene	0.059	3.4	<input type="checkbox"/> Indeno (1,2,3-c,d) pyrene	0.0055	3.4	<input type="checkbox"/> tris-(2,3-Dibromopropyl) phosphate	0.11	0.10
<input type="checkbox"/> o-Cresol	0.11	5.6	<input type="checkbox"/> Iodomethane	0.19	65	<input type="checkbox"/> Vinyl chloride	0.27	6.0
<input type="checkbox"/> m-Cresol (difficult to distinguish from p-cresol)	0.77	5.6	<input type="checkbox"/> Isobutyl alcohol	5.6	170	<input type="checkbox"/> Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations).	0.32	30
<input type="checkbox"/> p-Cresol (difficult to distinguish from m-cresol)	0.77	5.6	<input type="checkbox"/> Isodrin	0.021	0.066	<input type="checkbox"/> Antimony	1.9	1.15 mg/L TCLP
<input type="checkbox"/> Cyclohexanone	0.36	0.75 mg/L TCLP	<input type="checkbox"/> Isosafrole	0.081	2.6	<input type="checkbox"/> Arsenic	1.4	5.0 mg/L TCLP
<input type="checkbox"/> 1,2-Dibromo-3-chloropropane	0.11	15	<input type="checkbox"/> Kepone	0.0011	0.13	<input type="checkbox"/> Barium	1.2	21.0 mg/L TCLP
<input type="checkbox"/> Ethylene dibromide (1,2-Dibromoethane)	0.028	15	<input type="checkbox"/> Methacrylonitrile	0.24	84	<input type="checkbox"/> Beryllium	0.82	1.22 mg/L TCLP
<input type="checkbox"/> Dibromomethane	0.11	15	<input type="checkbox"/> Methanol	5.6	0.75 mg/L TCLP	<input type="checkbox"/> Cadmium	0.69	0.11 mg/L TCLP
<input type="checkbox"/> 2,4-D (2,4-Dichlorophenoxyacetic acid)	0.72	10	<input type="checkbox"/> Methapyrilene	0.081	1.5	<input type="checkbox"/> Chromium (Total)	2.77	0.60 mg/L TCLP
<input type="checkbox"/> o,p'-DDD	0.023	0.087	<input type="checkbox"/> Methoxychlor	0.25	0.18	<input type="checkbox"/> Cyanides (Total) ⁴	1.2	590
<input type="checkbox"/> p,p'-DDD	0.023	0.087	<input type="checkbox"/> 3-Methylcholanthrene	0.0055	15	<input type="checkbox"/> Cyanides (Amenable) ⁴	0.86	30
<input type="checkbox"/> o,p'-DDE	0.031	0.087	<input type="checkbox"/> 4,4-Methylene bis (2-chloroaniline)	0.50	30	<input type="checkbox"/> Fluoride	35	NA
<input type="checkbox"/> p,p'-DDE	0.031	0.087	<input type="checkbox"/> Methylene chloride	0.089	30	<input type="checkbox"/> Lead	0.69	0.75 mg/L TCLP
<input type="checkbox"/> o,p'-DDT	0.0039	0.087	<input type="checkbox"/> Methyl ethyl ketone	0.28	36	<input type="checkbox"/> Mercury-Nonwastewater from Retort	NA	0.20 mg/L TCLP
<input type="checkbox"/> p,p'-DDT	0.0039	0.087	<input type="checkbox"/> Methyl isobutyl ketone	0.14	33	<input type="checkbox"/> Mercury-All Others	0.15	0.025 mg/L TCLP
<input type="checkbox"/> Dibenz(a,h)anthracene	0.055	8.2	<input type="checkbox"/> Methyl methacrylate	0.14	160	<input type="checkbox"/> Nickel	3.98	11.0 mg/L TCLP
<input type="checkbox"/> Dibenz(a,e)pyrene	0.061	NA	<input type="checkbox"/> Methyl methansulfonate	0.018	NA	<input type="checkbox"/> Selenium	0.82	5.7 mg/L TCLP
<input type="checkbox"/> m-Dichlorobenzene	0.036	6.0	<input type="checkbox"/> Methyl parathion	0.014	4.6	<input type="checkbox"/> Silver	0.43	0.14 mg/L TCLP
<input type="checkbox"/> o-Dichlorobenzene	0.088	6.0	<input type="checkbox"/> Naphthalene	0.059	5.6	<input type="checkbox"/> Sulfide	14	NA
<input type="checkbox"/> p-Dichlorobenzene	0.090	6.0	<input type="checkbox"/> 2-Naphthylamine	0.52	NA	<input type="checkbox"/> Thallium	1.4	0.2 mg/L TCLP
<input type="checkbox"/> Dichlorodifluoromethane	0.23	7.2	<input type="checkbox"/> o-Nitroaniline	0.27	14	<input type="checkbox"/> Vanadium ⁵	4.3	1.6 mg/L TCLP
<input type="checkbox"/> 1,1-Dichloroethane	0.059	6.0	<input type="checkbox"/> p-Nitroaniline	0.028	28	<input type="checkbox"/> Zinc ⁶	2.61	4.3 mg/L TCLP

COPY

*For foot notes see 40CFR 268.48

Certification Standards

I certify that I have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification. I believe that the information I submitted is true, accurate and complete.

Attachment 13 page 3 of 3

Signature Arnold Kane Title Maintenance Manager Date 1-17-06

Attachment 14

DASCO Guard MSDS

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D. A. STUART COMPANY
MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL PRODUCT IDENTIFICATION:

PRODUCT NAME : DASCO GUARD 2413
PRODUCT ID NUMBER : 02413.00 D01
PRODUCT CLASS : RUST INHIBITOR

MANUFACTURER IDENTIFICATION:

NAME : D. A. STUART COMPANY
ADDRESS : 4580 WEAVER PARKWAY
WARRENVILLE IL
60555
TELEPHONE : 630-393-0833

FOR CHEMICAL EMERGENCY

Spill, leak, fire, exposure, or accident
EMERGENCY CONTACT : CHEMTREC
EMERGENCY TELEPHONE : (800) 424-9300

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

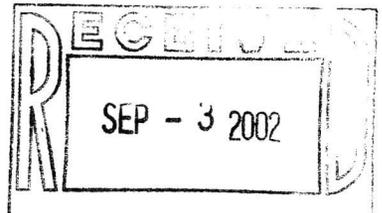
1
CAS# 64742-52-5
SEVERELY HYDROTREATED HEAVY NAPHTHENIC DISTILLATE
PCT BY WT: < 35
EXPOSURE LIMIT:
ACGIH TLV/TWA: 5 MG/M3 (OILMIST)
ACGIH TLV/STEL: 10 MG/M3 (OILMIST)
OSHA PEL/TWA: 5 MG/M3 (OILMIST)

2
CAS# 64741-97-5
SOLVENT-REFINED LIGHT NAPHTHENIC DISTILLATE
PCT BY WT: < 3

3
CAS# 25619-56-1
BARIUM DINONYLNAPHTHALENESULFONATE
PCT BY WT: < 3

4
CAS# 1569-01-3
N-PROPOXYPROPANOL
PCT BY WT: < 2
EXPOSURE LIMIT:
ACGIH TLV/TWA: NONE

5
CAS# 64742-46-7
PETROLEUM HYDROCARBONS
PCT BY WT: < 60
EXPOSURE LIMIT:
ACGIH TLV/TWA: 5 MG/M3 (OILMIST)



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(double sided)

D. A. STUART COMPANY
MATERIAL SAFETY DATA SHEET

02413.00 D01
DASCO GUARD 2413

ACGIH TLV/STEL: 10 MG/M3 (OILMIST)
OSHA PEL/TWA: 5 MG/M3 (OILMIST)

This product contains no components, present in excess of 0.1%
by weight, which are listed as carcinogens by IARC, NTP, or OSHA.

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE HEALTH HAZARDS: prolonged or frequent contact may cause skin and eye irritation. Inhalation of mists/vapors may cause respiratory irritation.

CHRONIC HEALTH HAZARDS: Not determined for the product as a whole.

SIGNS AND SYMPTOMS OF OVEREXPOSURE:
Possible red and/or itching skin due to overexposure.

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: Flush with water at once for at least 15 minutes, lifting upper and lower lids to ensure even flushing. Seek medical attention.

SKIN CONTACT: Remove contaminated clothing immediately, and wash affected area thoroughly with soap and water. If irritation persists, seek medical attention.

INHALATION: If a person breathes in large amounts of this product, move the exposed person to fresh air at once. If breathing becomes difficult, administer oxygen and seek immediate medical attention.

INGESTION: Rinse mouth immediately. Never give anything to an unconscious person. Do not induce vomiting unless advised by a physician. Seek immediate medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES:
Flashpoint 230.0 °F COC
Auto-ignition temperature. -N/A
Lower Explosion Limit. . . -N/A
Upper Explosion Limit. . . -N/A

EXTINGUISHING MEDIA:
Dry Chemical, Foam, CO2, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS:
None

D. A. STUART COMPANY
MATERIAL SAFETY DATA SHEET

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SPECIAL FIRE FIGHTING PROCEDURES:
None

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Persons not wearing proper personal protective equipment as stated in Section 8 should be excluded from area of spill. Extinguish all flames in the vicinity. Dike spill and soak up with inert absorbent material. Place in appropriate containers and affix proper labels.

Store containers closed, away from ignition sources such as open flames. Keep away from extreme temperatures.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Store containers closed, away from ignition sources such as open flames. Keep away from extreme temperatures.

OTHER PRECAUTIONS:
Use good personal hygiene. For industrial use only. Avoid breathing mists and vapors. Wear all appropriate personal protection equipment at all times.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

EYE PROTECTION: Safety Glasses
PROTECTIVE GLOVES: Rubber, Impervious

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
An eyewash fountain should be located nearby work area at all times for emergency use.

RESPIRATORY PROTECTION (Specify Type):
If ventilation equipment is not sufficient to keep airborne concentrations below exposure limits, a NIOSH approved respirator should be worn.

VENTILATION:
Local Exhaust: Recommended
Mechanical: None Special
Special: None Special
Other: None Special

WORK/HYGENIC PRACTICES:
Use good personal hygiene at all times. Launder soiled clothing before reuse. Wash hands thoroughly before eating or smoking.

D. A. STUART COMPANY
MATERIAL SAFETY DATA SHEET

02413.00 D01
DASCO GUARD 2413

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical Appearance	:	LIGHT AMBER
Odor	:	NEUTRAL
Physical State	:	LIQUID
pH	:	-N/A
Vapor Pressure	:	-N/A
Vapor Density	:	-N/A
Boiling Range	:	Lower - N/A °F
		Higher - N/A °F
Water Solubility	:	INSOLUBLE
Specific Gravity	:	.876
Evaporation Rate	:	-N/A

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBILITY (Materials To Avoid): Strong oxidizing agents, strong acids

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Carbon Monoxide
and Carbon Dioxide

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID: Keep away from heat, sparks, open flames, or all
sources of ignition. Do not store next to or with
incompatible materials.

SECTION 11 - TOXICOLOGICAL INFORMATION

Please refer to Section 3 for information on potential health effects.

SECTION 12 - ECOLOGICAL INFORMATION

Ecological testing has not been conducted on this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Follow all Federal, State, Local and Corporate Regulations for disposal.
The disposal method and manner practices should be acceptable to good
waste management practices and follow applicable codes and regulations.

SECTION 14 - TRANSPORT INFORMATION

DOT SHIPPING DESCRIPTION:

NOT DOT REGULATED

D. A. STUART COMPANY
MATERIAL SAFETY DATA SHEET

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SECTION 15 - REGULATORY INFORMATION

SARA 311 AND 312 INFORMATION:

This product contains the following substances defined as Hazardous by OSHA Hazard Communication Standard 29 CFR 1910.1200 (d).

CAS#	Chemical Name	% By Weight
------	---------------	-------------

See Section 2

SARA 313 INFORMATION:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

BARIUM DINONYLNAPHTHALENESULFONATE
CAS# 25619-56-1 PCT BY WT: < 3

SECTION 16 - OTHER INFORMATION

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS) INFORMATION:

Health- 1	Flammability- 1
Reactivity- 0	Personal Protective Equipment- B

PPE "B" = Safety Glasses and Gloves

Prepared by : EHS Department
MSDS Last Revision Date : 08/21/2002
MSDS Print Date : 08/22/2002

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE BY THE D.A. STUART COMPANY. HOWEVER, NO WARRANTY, EXPRESSED OR IMPLIED, IS GIVEN REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF.

Attachment 15

Cedar Falls Oil Co. Recycling Record

Attn: Ron Kane

Cedar Falls Oil Co

305 Horty St
Po Box 785
Cedar Falls, Iowa 50613
(319) 277-5421
800-373-5421

Recycling Manifest

Date 10/11/2000

Customer's name Advanced Heat treat

Waters

Gallons (used oil) 110

This oil will be used as fuel for industrial furnaces that are used to make asphalt for Iowa roads.

Our EPA Number's are IAR000006478

IAD981496680

Thank you
Jerry Steward

Ron

Attachment 16

Used Oil Generator Checklist

J. USED OIL - RCRA INSPECTION CHECKLIST

1. What Used Oil activities does the facility engage in? quench oil + motor oil from forklifts, cleanout of furnaces
- a. Type of used oil generated? motor + mineral
- b. Amount of used oil generated? varies; 180-450 gallons/month for quench oil and motor oil; 3-55 gallon drums every 4-5 years for furnace cleanout

40 CFR 279.12 Prohibition Questions

1. Is used oil being managed only in a surface impoundment or waste pile subject to regulation under 40 CFR Parts 264 or 265?
 Yes No Not Applicable (NA)
2. Is used oil being used as a dust suppressant? Yes No
3. Is off-specification oil fuel burned for energy recovery in only industrial furnaces, industrial boilers, utility boilers, used oil-fired space heaters, or hazardous waste incinerators identified in 40 CFR Part 279.12 (C)(1-3)? Yes No

Subpart C - Standards for Used Oil Generators

(Check here if this section is NA)

Instructions: Fill out this section if the facility generates used oil or if facility activities first caused the used oil to become subject to regulation (see definition and applicability of used oil generator in 40 CFR 279.20). Used oil generators are subject to all applicable Spill Prevention, Control and Countermeasures (SPCC) requirements (40 CFR Part 112) and underground storage tank standards (40 CFR Part 280) in addition to the requirements of Subpart C.

Regulation and Standard	Violations
<p>279.21 Hazardous Waste Mixing</p> <p>1. Is the generator mixing hazardous waste with used oil? If yes, is the generator of a used oil containing greater than 1,000 parts per million (ppm) total halogens managing the used oil as a hazardous waste unless the used oil presumption is rebutted?</p> <p>2. Are analytical data available?</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p>
<p>279.22 Used Oil Storage</p> <p>1. Does the generator only store used oil in tanks, containers, or units subject to regulation under 40 CFR Parts 264 or 265?</p> <p>2. Are containers and aboveground tanks used by a generator to store used oil in good condition, with no visible leaks?</p> <p>3. Are containers, aboveground tanks, and fill pipes used for underground tanks labeled or marked "Used Oil"?</p> <p>4. Upon detection of a release of used oil, has the generator a. Stopped the release? b. Contained the release? c. Cleaned up and managed the used oil and other materials? d. Repaired or replaced the containers or tanks prior to returning them to service, if necessary?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>
<p>279.23 On-Site Burning in Space Heaters</p> <p>1. Is the generator burning used oil in used oil fired space heaters only when a. The heater burns only used oil that the owner or operator generates or used oil received from household do-it-yourself generators? b. The heater is designed to have a maximum capacity of not more than 0.5 million British Thermal Units per hour? c. The combustion gases from the heater are vented to ambient air?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>

Regulation and Standard	Violations
<p>279.24 Off-Site Shipment</p> <p>1. Has the generator ensured that the used oil is hauled only by a transporter that has obtained an U.S. Environmental Protection Agency (EPA) identification (ID) number?</p> <p>2. Does the generator have a tolling arrangement with a transporter without an EPA ID number?</p> <p><i>If yes, answer the three following questions. If no, move to question 6.</i></p> <p>3. Is the used oil reclaimed and returned by the processor or re-refiner to the generator for use as a lubricant, cutting oil, or coolant?</p> <p>4. Does the tolling contract indicate the type of used oil and the frequency of shipment?</p> <p>5. Is the vehicle used to transport the used oil to the processing or re-refining facility and to deliver recycled used oil back to the generator owned and operated by the used oil processor or re-refiner?</p> <p>6. Does the generator transport used oil generated at the generator's site or used oil collected from household do-it-yourselfers to a used oil collection center or to aggregation points owned by the generator?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p>
Regulation and Standard	Violations
<p>7. Does the generator transport used oil in a vehicle owned by the generator or an employee of the generator?</p> <p>8. Does the generator transport no more than 55 gallons of used oil at any time?</p> <p>9. Does the generator transport the used oil to a used oil collection center that is registered, licensed, permitted, or recognized by a state/county/municipal government to manage used oil?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA</p>

For further Used Oil questions refer to Appendix 2-4:

Subpart D - Standards for Used Oil Collection Centers and Aggregation Points

Subpart E - Standards for Used Oil Transporters and Transfer Centers

Subpart F - Standards for Used Oil Processors and Re-Refiners

Subpart G - Standards for Used Oil Burners Who Burn Off-Specification Used Oil for Energy Recovery

Subpart H - Standards for Used Oil Fuel Marketers